McGill University

MACDONALD PHYSICS BUILDING.

MEMORANDUM

September 17th, 1925

TO Sir Arthur Currie, FROM A. S. Eve

Dear Sir Arthur,

I enclose a brief note about the summer work in the Physics Building which has been sent to the Montreal Star and to the McGill News.

Yours very sincerely,

A S Eve

MCGILL UNIVERSITY
DEPARTMENT OF PHYSICS

In the coming session there will be twelve Graduate Students doing research work in the Macdonald PhysicsBuilding: six of these are working for their Ph.D. and six for their M.Sc. This is the largest number of research students that the Department has had, even in the palmy days of Sir Ernest Rutherford.

Among recent publications may be noted the paper to the Royal Society of Canada by Dr. D. A. Keys on the "Ionization due to an Electric Current in a Partially Filled Hydrogen Tube", a report on "Recent Advances in Wireless Propagation" in the Journal of the Franklin Institute by Dr. A. S. Eve, a letter to "Nature" by Dr. E. S. Bieler on the "Band Spectra of Lead", in which he proves ~~that~~ that the bands are due to a molecule of lead and hydrogen and not to a molecule consisting of two atoms of lead. Dr. Foster who has just set up magnificent apparatus for the measurement of Stark effect, has sent a communication to "Nature" on some of his recent results. Miss Douglas has communicated quite recently to the "Atlantic Monthly" and to "Discovery" papers on the most recent advances in Astrophysics. These articles are expressed in very clear language and yet give the conclusions of very abstruse reasoning in Astrophysics. Miss Douglas has been working in the Yerkes Observatory during the summer vacation.

Professor H. E. Reilley has continued his work on the ageing and temperature coefficients of Weston Cells, a piece of work which has been continually in operation for more than twenty years. Dr. E. S. Bieler is working on the Hall effect in the Alkali Metals. Mr. E. E. Watson has an appointment as physicist during the summer at the Biological Station at St. Andrew's. Mr. F. R. Terroux has communicated to the Franklin Institute a paper on the method of photographing the fluorescent screens outside cathode oscillographs. The Professor of Applied Mechanics, Mr. E. Brown, has collaborated with Dr. D. A. Keys on the application of the piezo-electric method to the pressures on the blades of turbines. Mr. M. S. Home has begun to get results, by a novel method, of the dielectric constants of liquids and the effect of temperature upon them. Mr. H. B. Hachey is developing a new method, due to Dr. Shaw, of the separation of the effects due to radiation and convection under normal conditions in the atmosphere.

The replacement of apparatus lost in the fire of last December is approaching completion and most recent apparatus made by Hilger of London is now available for precision work of a high order.

It will be seen that the prospects of the Department are good and that considerable work has been carried out during the vacation. This statement is added because there seems to be an impression that as soon as the undergraduates leave the University there is a cessation of work, which is far from being the ca

.35

A S Eve

McGILL UNIVERSITY

MONTREAL.

THE MACDONALD PHYSICS BUILDING.

Staff.

Filled		Vacant	
2	Professors		
2	Assoc. Profs	1	Asst. Prof.
1	Asst. Prof	1	Demonstrator.
6	Demonstrators		

A S Eve

24.1.21.

Med. Biog.

February 9th, 1925.

Sir Robert Falconer, K.C.M.G.,
President, University of Toronto,
Toronto, Ont.

My dear Sir Robert:-

In a recent issue of 'Varsity' appears a rather long report of an address which Dr. Silberstein delivered to a body of Varsity students. In it he reflects somewhat severely on McGill. I was surprised to see the report and cannot think its publication either good neighbourliness or good journalism.

You will note Silberstein makes reflections on Chicago as well as McGill. May not the reason for that attack lie in the fact that he is now engaged in a quarrel with the Physics Department of Chicago because the press has not given him credit for some results obtained by that Department, and in the case of McGill because we did not accept him when he applied for the Chair of Mathematics on the death of Dr. Harkness. It would be a pity if the good relations between Toronto and McGill were interrupted in the slightest degree because Varsity provides a medium for Silberstein's spiteful remarks.

We seem to have some difficulty over arriving at suitable dates for the Universities' conference. The last week in May is not very convenient for McGill men as our Convocation comes on May 29th. I have a wire from Ling this morning asking me if the first week in June would be better, but as in it comes the King's birthday and probably your Convocation I have wired to him that it is better to keep to May.

I am very much interested in Ferguson's proposal to have the first two years in Arts given at the High Schools. The reasons therefor will probably be mentioned in our discussion at the Conference, where I promised to read a paper on wastage.

With all good wishes, I am,

Yours faithfully,

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

Murray
Gillson
Wm.
King
Currie
Monday 15th 1 p.m.
Get luncheon party

December
Ninth
1 9 2 4

subject Physics and Mathematics

Sir Arthur Currie,
Principal of McGill University,
Montreal.

Dear Sir Arthur,

During more than twenty years the Departments of Mathematics and of Physics have worked together in a most cordial and harmonious manner, and, in consequence, have jointly developed an Honour School in Mathematics and Physics which is a great credit to McGill and the envy of many other Universities. Recent action shows that we may carelessly cast away a pearl of great price. Toronto University has recently passed through a somewhat similar transition, but we should not do so without careful thought, and, in any case, the present drift is being conducted in a fashion which is to be deplored.

The change, which may result in what might be termed a dissolution of partnership, was brought before the Faculty of Arts under a notice in the agenda which gave no indication of the actual scheme. Dr. King's protest was timely and just, although it received criticism from the chair.

No member of the Physics Staff, either publicly or privately, received intimation of the change, which was sufficiently important to demand some consultation between the mathematicians and the physicists. The point is this: taking human nature as it is, the majority of students are not likely to take an Honour Course in Mathematics AND Physics when they can obtain honours in Mathematics alone. Hence we may be compelled, in self-defence, to start an Honour Course in Physics alone; so that students may have three choices, (i) Honours in Mathematics, (ii) Honours in Physics, (iii) Honours in Mathematics and Physics.

2 pp.

A.C. - A.S.E. 9.12.24.

It is not desired to take hasty action in this respect and I do strongly advocate that we should retain the cordial relations of the past combined with reasonable courtesy between Department and Department when their interests are involved. There are other indications that this is being abandoned and I cannot conceive a more deadly retrograde step.

Yours very sincerely,

A S Eve

Director Department of Physics.

McGILL UNIVERSITY

FACULTY OF APPLIED SCIENCE

OFFICE OF THE DEAN

MONTREAL. Decr. 20th.1924.

Sir Arthur Currie, G.C.M.G., K.C.B., LL.D.,
Principal,
McGill University.

Dear Sir Arthur,

Referring again to the proposed Committee to correlate the work of the Mathematical and other Departments, Dr. Murray has suggested to me that it would be desirable to have the Electrical Engineering Department represented, inasmuch as the work of that Department has particular points of contact with Mathematics, Physics and Chemistry.

This seems to me a good idea, and I would, therefore, suggest that Dr. Herdt or Professor Christie be added to the Committee, in addition to Professor Brown whom I suggested in my previous note.

Yours faithfully,

H. M. MacKay

Dean.

McGILL UNIVERSITY
MONTREAL

FACULTY OF APPLIED SCIENCE

D. A. MURRAY, PH.D.
PROFESSOR OF APPLIED MATHEMATICS

Dec. 20th. 1924.

Sir Arthur Currie, G.C.M.G., K.C.B., LL.D.,
Principal,
McGill University.

Dear Sir Arthur,

In reply to your note of December 17th. on the Consultative Committee to be established for liaison purposes between certain departments of the University, I beg to submit the names of Dr. Sullivan and myself as representatives of the Department of Mathematics on the Committee.

Yours sincerely,

D. A. Murray.

Chairman Dept. of Mathematics.

R. F. RUTTAN, DIRECTOR

MCGILL UNIVERSITY
DEPARTMENT OF CHEMISTRY

MONTREAL, 19th December, 1924.

Sir Arthur Currie,
Principal,
McGill University.

Dear Sir Arthur:-

I am very glad that you have seen fit to create a liaison between the abstract and applied sciences through a committee representing four departments.

I have much pleasure in recommending Dr. Otto Maass, Professor of Physical Chemistry, to represent the department of Chemistry. Dr. Maass is an excellent mathematician and physicist.

Sincerely yours,

R. F. Ruttan

Director of Chemistry.

RFR/JH

Consultative Mathematical Com

McGILL UNIVERSITY

FACULTY OF APPLIED SCIENCE

OFFICE OF THE DEAN

MONTREAL, Decr. 19th. 1924.

Sir Arthur Currie, G.C.M.G., K.C.B., LL.D.,
Principal,
McGill University.

Dear Sir Arthur,

Referring to your letter of Decr. 17th., may I say that my suggestion regarding the proposed Committee to keep in touch the work in Mathematics and certain other Departments was that the group of subjects under the name of Mechanics should be represented, and not Mechanical Engineering. The group in question includes Strength of Materials and Hydraulics, as well as Mechanics itself, and is basic to all the engineering courses.

If this is right I would suggest Professor Brown as the representative on the Committee. He has already done much to bring the instruction in Mechanics and Mathematics closer together and is heartily in sympathy with the closest co-operation in this respect.

Yours faithfully,

H. M. MacKay

Letter also sent to:
Dr. H. M. Mackay,
Dr. Eve,
Dr. Ruttan
Dean Ira Mackay (for information only)

Copy

December 17th, 1924.

Dr. D. A. Murray,
Department of Mathematics,
McGill University.

Dear Dr. Murray:-

Following suggestions made by the Departments concerned I propose to establish a committee of five, amde up as follows:

2 representatives from Dept. of Mathematics
1 representative from Dept. of Physics
1 representative from Dept. of Mechanical Engineering
1 representative from Dept. of Chemistry.

The establishment of this committee is to provide a medium whereby matters in which all the above mentioned departments are concerned may be discussed before presentation to Faculty and final action by that body. The functions of the committee will be consultative but not executive, nor will it have any legal power. It is hoped that in this way the necessary liaison between the departments concerned will be strengthened.

Will you please give me the names of the representatives of the Department of Mathematics.

Yours faithfully,

Principal.

McGill University.

MACDONALD PHYSICS BUILDING.

MEMORANDUM 24.12.24

TO The Principal FROM A. S. Eve

Committee of Five, as suggested in your letter of 17th Dec.

Representation of Physics Dept.

A. S. Eve.

I suggest that in every case if the Representation cannot attend, that he may send a substitute from the Dept.

So that the Committee is
always representative of all
Departments concerned.

A. S. Eve

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

Copy

March
Tenth
1924.

Sir Arthur Currie, G.C.M.G., K.C.B.,
Principal,
McGill University.

Dear Sir Arthur,-

Mathematics and Physics are so closely related and the welfare of the Honours School and Graduate School in Physics is so bound up with the honour teaching in Mathematics, that I write to beg for the privilege of a seat on the Mathematical Board. Changes in the curriculum which might appear trivial in the First or Second Year may have far reaching effects on the whole stability of the Honour School in Physics.

Please be so good as to let me know your wishes in this matter.

Yours very sincerely,

A S Eve

Director of Physics.

To Prof D. A. Murray

Have you any comment to make?

11/3/24 A W Currie

McGILL UNIVERSITY
MONTREAL

FACULTY OF APPLIED SCIENCE

D. A. MURRAY, PH. D.
PROFESSOR OF APPLIED MATHEMATICS

Copy

March 12th. 1924.

Sir Arthur Currie, G.C.M.G., K.C.B., LL.D.,
Principal,
McGill University.

Dear Sir Arthur,

Thanks very much for giving me an opportunity to comment on Professor Eve's note of March 10th.

I hardly need say that I and all the other members of the mathematical staff realize that there is necessarily a very close relation between Mathematics and Physics, especially in certain inter-relating branches of these subjects. We also realize that it will be to the great advantage of both departments and to the honour of the University for the Department of Mathematics and the Department of Physics to work together in co-operation and in the greatest possible harmony.

I can say for all the members of the mathematical staff that we shall be careful to consult Dr. Eve and be advised by him on all matters affecting his department for which provision can possibly be made in, or by, our department.

As for the Mathematical Board it does not seem to have been continued or provided for in the new regulations of the University. If the renewal, or creation, of such a Board is in contemplation, its constitution, duties, and powers, will have to be determined after consideration by some committee, composed perhaps of the Deans of Arts and Applied Science, and of members of the departments which have close relations with mathematics, viz.,

McGILL UNIVERSITY
MONTREAL

FACULTY OF APPLIED SCIENCE

D. A. MURRAY, PH.D.
PROFESSOR OF APPLIED MATHEMATICS

Physics, Mechanics, Civil Engineering, Electrical Engineering and Mechanical Engineering. If a Mathematical Board is constituted, it seems to me that not merely one, but several of the Departments related to mathematics should be represented on it.

While making these observations on the Mathematical Board, I may say that I am not convinced of the necessity for its existence. The Department of Mathematics is governed and regulated by the Faculties under which it works and by Corporation. I think that all the good that can be hoped to be attained by means of any Mathematical Board can be more directly attained, and attained under possibly happier conditions, through friendly, if informal, interchange of ideas between the members of the Department of Mathematics and the members of other Departments. It may also be observed that under the latter method of functioning the Department of Mathematics will be in precisely the same condition of dignity and independence as is enjoyed by the other Departments of McGill University.

I remain,

Yours sincerely,

D. A. Murray,

Chairman Department of Mathematics.

P.S. Dear Sir Arthur,

If you wish it or think it necessary, I shall be very glad to confer with you further on this matter.

Yours sincerely,

D. A. Murray.

Professor Eve's letter is returned herewith.

[illegible]

I. That the following be enacted as one of the regulations of Corporation: There shall be a committee to be known as the Consultative Mathematical Committee, constituted as follows:-

Two representatives from the Department of Mathematics.
One representative from the Department of Chemistry.
One representative from the Faculty of Applied Science, representing the group of subjects under the name of Mechanics.
One representative from the Department of Electrical Engineering.
One representative from the Department of Physics.

In each case the representative shall be appointed by the Head of the Department concerned, with the exception that in the case of a representative from the grouped subjects in the Faculty of Applied Science, the Dean of the Faculty of Applied Science shall name the representative. This Committee is established in order to strengthen the necessary liason between the departments concerned and to provide a medium whereby matters in which all such departments are interested may be discussed before presentation to a Faculty and final action by that body. The functions of that Committee shall be ~~[illegible]~~ consultative and in no way executive, nor shall it have any authority to legislate regarding the subjects which may come within its purview.

II. The following have been nominated as members of the Consultative Mathematical Committee:-

Department of Mathematics, Dr. D.A. Murray, Dr. Sullivan.
Department of Chemistry, Dr. Otto Maass.
Department of Physics, Dr. A.S. Eve,
Depratment of Electrical Engineering, Dr. L.A. Herdt,
Faculty of Applied Science - Grouped Subjects, Prof. E.R. Brown.

I. That the following be enacted as one of the regulations of Corporation: There shall be a committee to be known as the Consultative Mathematical Committee, constituted as follows:-

Two representatives from the Department of Mathematics.
One representative from the Department of Chemistry.
One representative from the Faculty of Applied Science, representing the group of subjects under the name of Mechanics.
One representative from the Department of Electrical Engineering.
One representative from the Department of Physics.

In each case the representative shall be appointed by the Head of the Department concerned, with the exception that in the case of a representative from the grouped subjects in the Faculty of Applied Science, the Dean of the Faculty of Applied Science shall name the representative. This Committee is established in order to strengthen the necessary liason between the departments concerned and to provide a medium whereby matters in which all such departments are interested may be discussed before presentation to a Faculty and final action by that body. The functions of that Committee shall be fully consultative and in no way executive, nor shall it have any authority to legislate regarding the subjects which may come within its purview.

II. The following have been nominated as members of the Consultative Mathematical Committee:-

Department of Mathematics, Dr. D.A. Murray, Dr. Sullivan.
Department of Chemistry, Dr. Otto Maass.
Department of Physics, Dr. A.S. Eve,
Depratment of Electrical Engineering, Dr. L.A. Herdt,
Faculty of Applied Science - Grouped Subjects, Prof. E.R. Brown.

McGill Broly

Mathematics — Physics
Eve — nursing

724 n 25.

<u>MEMORANDUM</u>

February 26th, 1924.

This is a strange memorandum.

(1) It partakes of the nature of a round robin in as much as it is signed by all the members of the Physics Department.

(2) It apparently is meant to justify the remarks of Silberstein, but its third paragraph proves that Silberstein was not justified in what he said. He therefore lied about McGill. The fact that since he knew he lied and has not apologized proves that the man is not only a liar but a bounder. (See also letters from Falconer and McLennan)

(3) The incident of Silberstein is made the foundation of subsequent representations. It is a pity that such representations were based on so objectionable a foundation.

Quote

(4) These representations deal with the difference in accommodations and facilities at Toronto and at McGill. Much is made of the superior accommodation at Toronto, yet it is stated in the second last paragraph that "a good staff of men who can both teach well and do good research work will secure results superior to those attained by building and equipment, however aplendid, apart from such a staff". No better facilities existed at McGill in Rutherford's time than exist to-day and any criticism of the amount and quality of research work done at McGill can not be based on the lack of facilities. There is superior accommodation at Toronto but there are more students and while more accommodation is desirable here it cannot be given in preference to other more pressing requirements of the University. The Physics Department must realize that it is the most expensive department at the University.

(5) Honour Courses: This introduces a question of general university policy and it is a pity to link it up with the Silberstein incident. The memorandum admits that students leave McGill as well prepared as

anywhere else, so why adopt Toronto's system. I cannot see the sense in advocating that a student be admitted to an honour course in his first year at McGill in Classics when Greek is only begun at the University. Furthermore, the Mathematics Department have made special arrangements in order that students of exceptional ability may advance rapidly. I suggest that the policy put into effect by the present Mathematical Department be allowed to prove itsself worthy and that the constant nagging by the Physics Department should cease. It is strange but this nagging has only begun since the Physics Department has not had its way in the re-construction of the Mathematics Department on the death of Dr. Harkness. It seems to me that the Physics Department should attend to its own knitting. The only objection advanced by any one at McGill to an honour course has come from the Physics Department who objected to the Mathematics Department setting up an honour course. Furthermore, there have been signs indicating a willingness on the part of certain members of the Physics Department to introduce discord into the Mathematics Department. This sort of thing must cease.

Slattery's course at Toronto: Apparently some members of the Physics Department attach great importance to these courses. Professor Gillson informs me that they are very rule of thumb and rely more on the student's memory of a formula than a sound knowledge of the principles involved. Slattery, I believe, is a Physicist and not a Mathematician.

REPORT SUBMITTED TO THE PRINCIPAL OF MCGILL UNIVERSITY BY THE DEPARTMENT OF PHYSICS.

February 23, 1925

Quote

ok

On Tuesday, February 10, there appeared in the McGill Daily an extract from "The Varsity" entitled "Dr. Silberstein Compares Colleges". In speaking of McGill Dr. Silberstein is stated to have remarked as follows: "In considering the teaching staffs of McGill had admirable talent but that it was largely reserved for the higher years, and lectures to froshmen were rather inferior." These are the exact words printed in the McGill Daily.

Those who know Dr. Silberstein and the conditions under which the interview was given will have no difficulty in forming a just valuation of the article. But the general public and a great many at McGill do not know Dr. Silberstein, nor the conditions under which the interview was given. Moreover the fact remains that he intended originally to send his son to McGill and that he finally decided to send him to Toronto. Hence it appears desirable to make a concise statement as to the situation.

ORDINARY OR PASS CLASSES

We affirm without hesitation that the general instruction given to ordinary students in the Faculty of Arts, Applied Science, Medicine, Dentistry and Commerce, both in laboratory and lecture room, compare favourably with that given at Toronto or at any other University in North America. The general organization and efficiency of teaching are sound and good.

ACCOMMODATION

Nevertheless it must be pointed out that the work is carried out under great difficulty. At McGill we have one large lecture room; at Toronto they have three large lecture rooms: so that there is more time there for the preparation of lectures and it is possible to handle more than one large class at a time, which we cannot do at McGill. At McGill there is one elementary laboratory and at Toronto there are about five elementary laboratories: so that at McGill the apparatus has to be constantly changed to suit the various classes, while at Toronto the various subjects

Report 2.23.25.

are assigned each a separate laboratory, one for Mechanics, another for Optics, a third for Heat and two for Electricity and Magnetism. Moreover the research accommodation is much larger than we have at McGill. For example they have five mechanics to our three and, in addition, they have a glass blower, which indeed we need badly.

In spite of these draw-backs we can continue to make satisfactory arrangements provided there is no marked increase in the number of students. It should further be noted that the large Physics Building at Toronto is not used by the Faculty of Applied Science who receive their instruction in Physics in another Building. Hence in the much larger building at Toronto they handle much fewer students.

HONOUR COURSES.

Now we come to the crux of the whole affair of the Silberstein interview and the reason why he sent his son to Toronto. They have a system at Toronto which we advocate x for McGill. Students who pass their matriculation with honours - which must not be confused with our Senior Matriculation - have the privilege at Toronto of entering the Honour School in Mathematics and Physics in their first year. Hence, instead of their having to take six subjects as at McGill in the first year the students concentrate mainly on two subjects, namely Mathematics and Physics. Hence a good student at Toronto gets an additional year's instruction in Mathematics and Physics as compared with a student at McGill. Now it is only possible in exceptional cases to make up this difference by later instruction and the process involves high pressure in the third and fourth years. It will be understood that in the Faculty of Graduate Studies most of the time is spent in thesis and research work as it is assumed that the undergraduate training is completed.

We therefore recommend that serious consideration should be given to the adoption of a plan somewhat similar to that of Toronto whereby the student could give about half his time in his first year to Mathematics and Physics, taking in addition one or two educational courses in English, History or Languages.

Yet it may be added that by the end of the Fourth

x and have advocated

ASE

Report 23.2.25.

Year under the present regime our Honour Students are as able and as well trained as those who have completed their courses at most of the Universities on this continent. A comparison with Toronto is not altogether fair because the facilities and building there are superior to those of many of the Universities of this continent, such as Harvard. Moreover the appointment of a good staff of men who can both teach well and do good research work will secure results superior to those attained by building and equipment, however splendid, apart from such a Staff.

There appears to be a movement on foot at McGill in opposition to Honour Courses, whereas the pendulum is swinging the other way in the United States. In the case of Mathematics and Physics and the Classics, and possibly some other subjects, it is impossible for the student to attain a sufficiently high standard to make his mark in the world unless he becomes an Honour Student from the earliest possible opportunity, certainly his second year, or preferably his first year.

A S Eve

Louis V. King

A Norman Shaw.

H. E. Reilley.

D. A. Keys

E. S. Bieler.

President's Office.

February 12th, 1925

Principal Sir Arthur Currie, G.C.M.G.,

McGill University.

My dear Sir Arthur:

It was not until after Professor King called my attention to it on Monday that I saw the report of the conversation which Dr. Silberstein had with a reporter of "Varsity", and I greatly regretted to read it. As you must be aware it would be extremely difficult to supervise what goes into the students' newspaper, and I suppose they have got the idea of modern journalism that anything startling is good news. I have, however, seen the Editor and told him how much I regretted the occurrence, and this morning he has inserted a paragraph which I hope will in some degree atone for the error in judgment. I have also brought it to the attention of Dr. McLennan, the head of the department of Physics. Dr. Silverstein has I believe been going in and out of his laboratory for a while, though he has absolutely no connection with us. I hardly need to assure you that these sentiments do not at all express the views of the University of Toronto, which has always had the highest regard and respect for McGill. There is no University with which we stand on more friendly terms. It is too bad that a stranger, though I believe that he and your Professor King have been much together here, should cause any ill feeling. I will write to Dr. Silberstein about it.

With regard to the Conference of Universities I am afraid that the dates at the end of May will not suit us very well as a number of our men will then be marking their papers. I myself cannot be present as I leave the end of March for England. However, I will endeavour to secure one or two to represent the University of Toronto.

I do not think Mr. Ferguson's proposal can be seriously entertained. The political difficulties in the way have hitherto prevented even the putting back of the first year in the schools. For years I have wanted honour matriculation as entrance to the University and to have the ordinary B.A. degree given on three years' work, but the small High Schools and Continuation Schools would not accept the proposition,much less will they accept his proposal for the creation of schools with a two years' course.

With kind regards, I am,

Yours sincerely,

Robt A. Falconer

President.

University of Toronto
TORONTO, CANADA

DEPARTMENT OF PHYSICS

Toronto, February 12,1925.

Sir Arthur W. Currie, K.C.B., LL.D.,
Principal, McGill University
Montreal, P.Q.

Dear Sir Arthur,

I have just learned from Sir Robert Falconer that you were perturbed over the interview with Dr. Silberstein that recently appeared in Varsity. I am extremely sorry that any such interview was given. Besides being wholly in bad taste, it was quite inaccurate, Anyone who knows anything about the work in Physics knows how for years the Physical Laboratory at McGill held the leading place in this country. Of course we have progressed in Toronto - rather rapidly in the last few years, but that is no reason for anyone to make any odious comparisons.

I am in a position to know the work that has been done by your staff in Physics and all I can say is that it has been very fine. Silberstein seems to have found the atmosphere in Toronto inspiring but he has abused our hospitality. I am sorry to say that the fact is that the men about the place are not sorry he is gone. I have always treated him kindly but he does not seem to know how to appreciate kindness properly. and he does not know how to assess real and true hospitality at its proper value.

Please feel assured that nothing I have ever said or done could possibly constitute a basis for the interview that Dr. Silberstein gave. It was done wholly on his own and quite unknown to me.

With kindest regards,
I am, yours sincerely,

J.C. McLennan

February 13th,1925.

Dr. J. C. McLennan,
Department of Physics,
University of Toronto,
Toronto, Ont.

Dear Dr. McLennan:-

I have your note of the 12th of February with reference to Silberstein's interview. I know full well that for such a statement he would receive from your Department neither inspiration nor encouragement.

I have always been very proud and pleased that the relations between the University of Toronto and McGill were so cordial and it would take more than anything Silberstein might say to cause a ruption.

I am very glad that I did not listen to the suggestion to take him on the staff of McGill when Harkness died. I am afraid he too suffers at times from an "exalted" mind and I do not care to increase my experience with such.

With all good wishes, I am,

Yours faithfully,

DECEMBER 15, 1925.

A G E N D A.

1. Statement concerning Dr. H. M. Tory's urgent appeal to physicists and engineers for co-operation.

2. Statement concerning instructions from Dr. J. C. McLennan, Chairman of the main Associate Committee of Physics and Engineering Physics.
Subsequent correspondence with Dr. J. C. McLennan.
Opinions about possibilities for the local Quebec committee.

3. Formation of local Quebec committee.
Appointment of secretary for committee.
Additional names for membership.

4. Scheme for collection of problems.

(a) It is suggested that two or three members of the local committee shall be appointed to deal with each of the following subjects in connection with the desired report:-

Pure Physics.
Electrical Engineering, including Radio.
Mechanical Engineering -
(A special request is made to obtain detailed report on problems in connection with the investigation of improved house construction, heating and ventilating in reference to our Canadian climate).
Civil Engineering.
Mining Engineering.
Metallurgical Engineering.
Canadian Ice problems in Engineering and Navigation.
Medicine and Surgery, including Radiology and Physiology.
Agriculture.
Forestry.

(b) Each of these members shall endeavour to obtain assistance from their colleagues in the collection of information, and the data about problems should be collected as far as possible by means of personal discussion rather than merely by correspondence. Attention should be confined to the investigations which require the aid of physicists and engineers, and particularly to those cases in which it would, on national grounds, be appropriate to appeal for help to the Research Council rather than to Universities or local organizations.

(c) This work should be done during the next week, and a brief report furnished by each. It would be considered adequate if these reports contained a list of the problems with a short statement in each case indicating (1) the importance of the problem, (2) the nature of help required and (3) to what particular organizations or interests it will be of use.

5. It is suggested that this committee should meet again on January 5th to review the results of their work and to pass on a report to the main committee.

C O P Y.

HONONARY ADVISORY COUNCIL

FOR

SCIENTIFIC AND INDUSTRIAL RESEARCH.

The Physical Laboratory
University of Toronto,
December 5, 1925.

Dear Professor Shaw:-

At the meeting of the Associate Committee on Physics and Engineering Physics in Ottawa, on May 31, 1925, it was unanimously decided that the Committee should prepare for the Research Council, a list of problems in Physics and Engineering Physics, the investigation of which the Committee considers worth undertaking in Canada, special attention being given to those problems, the solution of which would have an economic value in Canada.

In order to undertake this work economically, rapidly, and effectively, it was decided by the Associate Committee to consider the Physicists and Engineering Physicists as forming groups representative of geographical divisions of Canada, each group having as its Chairman one who for the time being is a member of the Associate Committee.

The group divisions decided upon with the Chairman of each are as follows:-

DIVISION	CHAIRMAN	ADDRESS
British Columbia	J. S. Plaskett, B.A. D.Sc. F.R.S.C.	Director, Astrophysical Observatory, Victoria, B.C.
Alberta and Saskatchewan	R.W. Boyle, M.A. Ph.D. F.R.S.C.	Dean, Faculty of Applied Science, Univ. of Alberta, Edmonton, Ata.
Manitoba	Frank Allen, M.A. Ph.D. F.R.S.C.	Prof. of Physics, Univ. of Manitoba, Winnipeg, Man.
Ontario	J.C. McLennan, O.B.E. Ph.D. LL.D. F.R.S.	Prof. of Physics, Univ. of Toronto, Toronto, Ont.
Quebec.	A. N. Shaw, B.A. D.Sc. F.R.S.C.	Prof. of Physics McGill Univ. Montreal.
Maritime Provinces	H. L. Bronson, B.A. Ph.D. F.R.S.C.	Prof. of Physics Dalhousie University Halifax, N. S.

As chairman of your Division I should be obliged if you would kindly take the necessary steps to get into touch with all the Physicists and Engineering Physicists in your Division, and through consultation or correspondence with them, ascertain as fully as possible their views as to the problems in Physics and Engineering Physics that we, as an Associate Committee might deliberate upon with a view to reporting to the National Research Council, and to ensuring that all investigations that we may recommend that body to support are representative of the needs of Canada and possess either intrinsic merit or economic value.

I am authorized to say that such legitimate expenses as you may incur in working out the details of this scheme will be met.

We are anxious to draw up a draft report for consideration at a meeting of the Divisional Chairman or of the members of the Associate Committee, about the middle of January next, and I shall be obliged if you will kindly give immediate attention to this matter, and send to Mr. John Patterson, M.A., Secretary of the Associate Committee on Physics and Engineering Physics, and Meteorological Office, Toronto, the results of your consultations and deliberations as soon as possible.

Yours sincerely,

(SIGNED) J. C. McLennan (SIGNED) J. Patterson

CHAIRMAN SECRETARY

The Associate Committee on Physics and Engineering Physics of the National Research Council of Canada.

C O P Y

HONORARY ADVISORY COUNCIL

FOR

SCIENTIFIC AND INDUSTRIAL RESEARCH.

(B. Sent to Physicists and Engineering Physicists in Ontario.)

Dear Sir:-

You will see from the enclosed letter that I have been designated as Chairman of the Ontario division of the Associate Committee of Physics and Engineering Physics of the National Research council of Canada, and in this capacity have been asked to invite you to submit a list of problems in Physics and Engineering Physics the investigation of which in your opinionwould probably be of intrincis merit or of economic value to Canada.

I have been asked to state that what we have in mind is not investigations that Universities, Institutions or Organizations other than the Research Council should fully supporrt and finance, but only those that you think we should be justified in asking the Research Council to support financially in whole or in part.

We are anxious so to organize the activities of the Associate Committee that we shall make sure that we are not overlooking problems or classes of problems that should be investigated at once. Besides we are anxious, too, to encourage workers in Physics and Engineering Physics who possess research canpabilities to use their qualifications effectively on problems the investigation of which would cammand the support of scientific opinion in the Dominion, especially that of Physicists and Engineering Physicists.

Will you kindly oblige me by sending in your list of problems with any suggestions anent them before December 25th next.

We propose to hold a meeting of the Chairmen of the different Divisions of Canada or of the members of the Associate Committee early in January, and the Chairman of each Division has been asked to draw up a preliminary report on all the replies he receives from his Division for consideration at this meeting. In order to help me in drawing up my preliminary Report to the Meeting of the Divisional Chairmen I hope to call a meeting of all those I am inviting to send in problems. At this meeting we can discuss the situation and perhaps clarify our views regardingthe suitability for our purposes of the problems suggested. But please do not delay in sending in your problems and suggestions as soon as possible.

The Associate Committee on Physics and Engineering Physics hope in this way to be able to make a series of recommendations to the National Research Council before the end of January that will be of considerable use to that body in formulating a progressive and vigourous policy for encouraging and stimulating the investigation of problems in Physics and Engineering Physics that will give promise of valuable results.

Believe me,

Yours sincerely,

Chairman Ontario Division of Associate
Committee of Physics and Engineering
Physics of the National Research Council.

1. At present the Associate Committee may be able to furnish to an inquirer, expert opinions which might otherwise be unavailable.

2. Some member of the Associate Committee may be willing immediately to turn a competent young graduate student on to a new problem which merits attention.

3. If the Associate Committee receives a sufficient number of weighty requests about any one line of work, they will be in a position to make a strong recommendation to the Research Council for a special or extra grant to deal with the problem in question, (and incidently will provide the Research Council with a means of indicating clearly to people at large how it is functioning in the interests of Canadian industry).

4. If an engineer asks for more definite assurance that something will be done for him if he takes the trouble to prepare a statement about his own problems, he can be asked what the solution of his difficulties is worth to him, and can then be assured that if he cares to pay for services rendered, the Associate Committee will immediately find for him a competent group of workers to take up his problems.

REQUIREMENTS FOR
SENIOR MATRICULATION

Ap. Sci.	Commerce	Medicine
Physics	Physics or Chemistry + Accountancy	Chemistry and Physics

Double Course B.A., M.D.	Arts
Physics or Chemistry	Physics or Chemistry

25.9.26.

A S [signature]

2

Governors

Gifts

March 25, 1926.

E.W. Hollingum, Esq.,
Victor X-Ray Corporation of Canada,
523, Medical Arts Building, Montreal.

Dear Mr. Hollingum:-

May I on behalf of the University express our very sincere thanks for the Snook Machine which your Corporation was so good as to present to our Department of Physics.

It is such co-operation as this that makes ~~the~~ University progress possible, and I assure you that we appreciate very highly the generosity which has prompted you to make this handsome contribution towards research at McGill.

Yours faithfully,

Principal.

March
Sixteenth
1926

E. W. Hollingum, Esq.,
Victor X-Ray Corporation of Canada,
523 Medical Arts Building,
Montreal.

Dear Sir,

On behalf of the Department of Physics I write to thank you for your very handsome gift of a Snook Machine, which, I understand, has been running continuously for nearly twenty years in the General Hospital and is still in good working order.

This apparatus arrives at a fortunate time, for we are undertaking work in connection with cellulose for Dr. Hibbert, Professor of Industrial Chemistry, who, in turn, is working with the Pulp, Paper, and Cellulose industries of the country.

Let me assure you that your gift is greatly appreciated and that we hope to be making use of the apparatus in May.

I am sending a copy of this letter to Sir Arthur Currie, as he will, I think, write you an expression of appreciation on behalf of the University.

Yours very sincerely,

Director Department of Physics

McGILL UNIVERSITY

MONTREAL

THE MACDONALD PHYSICS BUILDING

March
Sixteenth
1926

Sir Arthur Currie,
Principal McGill University,
McGill University.

Dear Sir Arthur,

We have just received a handsome present from the Victor X-Ray Corporation. This is a Snook Machine, running at 110 D.C. and delivering 50 to 60 milliamperes at 140,000 volts. It was the first Snook machine ever brought into Canada, one of the first ten made by Snook.

It is a very valuable piece of apparatus and we are fortunate to receive it as a present. Moreover it will be very useful for the work which we contemplate during the summer and next session, when Mr. Patterson returns after two years work at the Royal Institution with W. Bragg.

I enclose a copy of my letter to the Victor X-Ray Corporation. Perhaps you would be willing to send an acknowledgment on the part of the University.

Yours very sincerely,

A S Eve

ENCLOSURE

Marquette Law Review
MARQUETTE UNIVERSITY
MILWAUKEE, WIS.

June 8th, 1926

My dear Sir Arthur:-

Presuming upon my slight acquaintance with you, I write for the purpose of ascertaining whether a physicist, who is also a Catholic priest, could obtain an instructorship at McGill University. The gentleman in question, Dr. John P. Donaghue, is at present Professor of Physics at Marquette. His doctor's degree was conferred at Munich and he has taught at Maynooth in Ireland. In addition to being a profound scholar he is graced with great personal charm.

Dr. Donaghue desires to remove from this country and prefers to obtain a position at McGill rather than in a strictly Catholic institution. He wants to teach only advanced work. I may add as a matter of interest that he does not have to wear clerical garb and is not controlled by any ecclesiastical authority on this side of the Atlantic.

Any information that you can give me in connection with this matter will be sincerely appreciated. I trust that you are enjoying your customary good health.

With my best wishes to Lady Currie and yourself,

Respectfully

James Maxwell Murphy

To General Sir Arthur Currie,
Principal of McGill University,
Montreal, Canada.

July 12th, 1926.

James Maxwell Murphy, Esq.,
Marquette Law Review,
Marquette University,
Milwaukee, Wis.

Dear Mr. Murphy:-

I have been away from Montreal a very great deal since the arrival of your letter of June 8th and thought that it had been answered.

Our staff for next year in Physics is complete, but the fact that Dr. Donaghue is a Roman Catholic would not in any way militate against his appointment here. This University is absolutely free to do what it pleases in the matter of appointments and in the matter of policy. We have many Roman Catholics on our staff.

I shall bear in mind Dr. Donaghue's name if a vacancy should occur.

Most cordially reciprocating your good wishes, I am,

Yours faithfully,

Principal.

December 14, 1925.

E.J. Lorette, Esq.,

Western Union Telegraph Co.,

Moncton, N.B.

Dear Mr. Lorette:-

Your letter of November 30th has been considered by the Department of Physics and their opinion is that there might be some definite physical explanation of the occurrences which you mention. Would you therefore give a description as detailed as possible of any particular test, stating any words which you have been able to get. You do not explain quite clearly whether the person to whom you refer hears the sounds and then tries to transmit them, or whether the transmission is involuntary. Perhaps you would make this point a little more definite. The more detailed the description you can give the better.

Yours faithfully,

Wilfrid Bovey.

To Col Bovey

Form 51 Can.

THE WESTERN UNION TELEGRAPH COMPANY

INCORPORATED

MANAGER'S OFFICE

Moncton.N.B.
Nov 30/25

Dear Sir-

I am andoperator at the Western Union here and have been confounder with somewhat of a mystery. A man here in this city is gifted with,what I suppose would be called intuition. He puts his finger to an instrument,we use to send messages on, and without the least strain or human effort the finger vibrates. But owing to the natural power it is not powerful enough to work the key,at times it misses and this makes it impossible to read.

We get some words,and those are just what we are looking for He claims any information can be obtained if we can get the proper instrument.The telegraphic sound comes very plain in his ears,we had and instrument that the Doctors use for testing the Heart and lungs but this is not plain enough to transform the sound clear enough to read.Would appreciate very much if you could advise me in any way where I could find an instrument similar to that which the Doctors uses but which would detect a very faint sound,so as to enable me to read this telegraphic code through the ear.Thanking you in advance

Yours truly

E J Lorette

E J Lorette
152 Lutes St
Moncton.N.B.

Dear Dr Eve

Can you understand this?

4/12/25

Arthur Bovey

Not clear. Please ask him to give a fuller & clearer ~~account~~ It may be interesting or even important

A S Eve

Ch. Bowes

M^cGILL UNIVERSITY

TEN EXTENSION LECTURES

THE STORY OF SCIENCE
in the Domains of Physics and Astronomy

January, February, and March, 1926
Macdonald Physics Building

			Wednesday 8.15 to 9.15 p.m. on
(1)	The Greeks and Romans	C.W.Stanley	January 20
(2)	The Dark and Middle Ages	W. T. Waugh	January 27
(3)	Copernicus, Kepler, Galilei, Newton.	A.H.S.Gillson	February 3
(4)	Gilbert, Oersted, Ampere, Galvani, Volta, Ohm.	E. S. Bieler	February 10
(5)	Kelvin, Helmholtz, Joule	A. S. Eve	February 17
(6)	Light (Subsequent Advances)	J. S. Foster	February 24
(7)	Sound " "	H.E.Reilley	March 3
(8)	Heat " "	A.N.Shaw	March 10
(9)	Electricity " "	D. A. Keys	March 17
(10)	Astrophysics	A. V. Douglas	March 24

The fee for these ten tectures is $5.00. Tickets should be obtained <u>in advance</u> at the Registrar's Office.

Members of the Staff and graduate students may attend if they obtain complimentary tickets <u>in advance</u> from the Registrar's Office.

Individual lectures 75 cents, to be paid at the door.

The object of the course is to illustrate the advance of scientific knowledge, with some emphasis on individual achievement and personality.

February 16th,1925.

R. Meldrum Stewart,Esq.,
Director, Dominion Observatory,
Department of the Interior,
Ottawa,Ont.

My dear Mr. Stewart:-

Let me acknowledge with thanks the receipt of your letter of February 12th.

I appreciate greatly your assurance that your Department will co-operate in any way possible should we decide to establish a course in Astronomy here. I shall discuss this matter further with Professors Gillson and King and write you again.

Yours faithfully,

R.M.S./K.N.

Department of the Interior

DOMINION OBSERVATORY

R. MELDRUM STEWART
Director

OTTAWA, CANADA, February 12, 1925.

Sir Arthur Currie,
President, McGill University,
Montreal, P.Q.

Dear Sir,

On several occasions recently I have been discussing with Professor King the possibilities of establishing an astronomical course at McGill University, and on the occasion of a recent visit to Montreal I had some discussion with Professor Gillson on the same subject. In the course of these conversations it was suggested that there might be the possibility of arranging for some practical training of students here. In view of this I thought that you might be interested in knowing my views on the matter.

We have at the present time in Canada no astronomical course in any of our Universities where it is possible for students to get real practical training in an observatory so that after graduation they could take a responsible part in observatory work without considerable further training. At Toronto they have a theoretical course, which I believe is very good and which is being constantly improved, and I understand that they are also looking forward to the time when they will have an observatory of their own. I believe, however, that there is plenty room for courses at other Universities, and that at both Toronto and McGill, at least, we should have real astronomical courses.

With regard to the training of a limited number of students, I have already remarked to Professor King and Professor Gillson that I see no reason why this could not be arranged satisfactorily. Of course for such an arrangement to be permanently satisfactory, it would have to be on a mutual basis; that is, the practical work would require to be so arranged that the student while getting instruction would be able to contribute something to our observatory work, but I do not see any particular difficulties in the way of this.

I may say that since my return to Ottawa I have talked the matter over with Mr. Cory, our Deputy Minister, and that he is favourably disposed.

If

If you should decide on such a course I should be glad to take the matter up with Professor King and Professor Gillson at the proper time, and to offer any cooperation which I may be able to give in any way.

Yours truly,

R. Meldrum Stewart

Director.

Memorandum

<u>Honours in Mathematics Physics and Astronomy.</u>

In view of future developments at McGill in connection with Graduate Research in Physics, Theoretical Physics, and Astronomy, the undersigned wishes to emphasize most strongly the importance of retaining in the undergraduate honour courses in Mathematics and Physics at McGill University a standard not less high than that which prevailed under Professor Harkness from 1903 to 1919.

After the war the large increase in the number of students requiring Elementary Mathematics made the maintenance of Advanced and Honour lectures throughout four years a serious task for the Mathematics Department in Arts.

Yet in view of the rapidly increasing standards in Honours Mathematics and Physics at other Canadian Universities, (a policy in regard to which the writer took considerable part, in some cases advising a curriculum following closely our own, in others recommending his Graduate Students for appointments in these Universities to establish Honours work along these lines to prepare students for graduate work at McGill in Physics and Theoretical Physics) - the proposed changes in what has hitherto been a joint enterprise between the Mathematics Department in Arts and the Physics Department require very careful and detailed consideration.

The writer has experienced that graduates from other Universities are better equipped mathematically to do graduate work in Physics, Theoretical Physics and Electrical Engineering than are our own graduates of recent years from either Arts or Applied Science. That our own men should not be at a disadvantage in later life as research engineers or Professors of Mathematics or Physics depends very greatly on the Honours standard in the Third and Fourth Years and especially on the preparation for this course from the moment they enter the Arts or Science Faculties in the First Year.

The writer has therefore made careful inquiries, at the International Mathematical Congress held in Toronto last August, at the recent Washington meeting of American Mathematical Society,(of which he has recently been invited to be a member) and more recently still at Toronto University in conference with the Mathematics and Physics Departments there.

As illustrating the high and rapidly improving standard of mathematical work in the University of Toronto the following First Year Time-table for Honour Mathematics and Physics Courses in that University is herewith attached.

FIRST YEAR MATHEMATICS AND PHYSICS

University of Toronto

Mathematics.

Analytical Geometry 2 hrs. (Synge)
(Smith's Conic Sections)

Higher Algebra 2 hrs. (Stevenson)
(Hall and Knight, from exponential theory on)

Spherical Trigonometry 1 hr. (DeLury)
(Todhunter and Leatham)

Actuarial Science 1 hr. (Mackenzie)
(Interest and Bond Values - Mackenzie)

(Note - 2 hrs. of analysis, Prof. DeLury, for Pure Mathematics Students only who also take all preceding subjects)

Physics

Heat 3 hrs. (lectures) (Satterly)
(Stewart and Satterly Text-book of Heat)

Mechanics 1 hr. (Satterly)
(Eggar also Wagstaff - Props. of Matter)

Calculations 1 hr. (Satterly)
(Calculus made Easy)

Laboratory 3 hrs. (General Physics principally Heat)

Chemistry

Lectures 2 hrs. (Kenrick)

Laboratory 2 hrs. (Kenrick and DeLury Lab. Manual)

Pass Subjects (Exempted from attendance if successfully passed in Senior Matriculation)

English 2 hrs.
French 4 hrs.
Latin 4 hrs.
History 2 hrs.

(Signed) George Silberstein
Jan. 23, 1925.

T The writer in collaboration with the Research Engineers of the General Electric Co. Schenectady, and consulting with American astronomers, has under consideration a plan for the development of Astonomy and Astronomical Research at McGill University. In preliminary conversations with Dr. Meldrum Stewart, Director of the Dominion Observatory, Ottawa, the possibility of the Ottawa Observatory and its resources being placed at the disposal of McGill University for practical astronomical work and research in co-operation with the Physics Department is now being carefully and favourably considered. This is a revival of far-reaching plans for astronomical work at McGill initiated about 1901 and unfortunately dropped, although McGill still possesses a site of 23 acres on Westmount Mountain forthis purpose.

By maintaining in Honour Undergraduate and Graduate work a standard in Mathematics and Mathematical Physics approximating to that now in effect in Cambridge University, England the writer feels that, with the present staff and some additional assistance in routine teaching, McGill will in a few years occupy a pre-eminent position in North America not only in Physics abd Theoretical Physicsb but also in Theoretical and Observational Astronomy.

The writer therefore urges very strongly that ways and means be found not only to carry on routine teaching effectively but by seeking special financial assistance (Carnegie Research Council, Research Council of Canada, the Rockefeller Foundation, appealing to the liberality of Montreal citizens) to bring about, during the next few years, a broad-minded and progressive policy for making McGill scientifically pre-eminent on this continent, through the aspirations of McGill's greatest benefactor, Sir William Macdonald.

Louis V. King

Memorandum

Honours in Mathematics Physics and Astronomy.

In view of future developments at McGill in connection with Graduate Research in Physics, Theoretical Physics, and Astronomy, the undersigned wishes to emphasize most strongly the importance of retaining in the undergraduate honour courses in Mathematics and Physics at McGill University a standard not less high than that which prevailed under Professor Harkness from 1903 to 1919.

After the war the large increase in the number of students requiring Elementary Mathematics made the maintenance of Advanced and Honour lectures throughout four years a serious task for the Mathematics Department in Arts.

Yet in view of the rapidly increasing standards in Honours Mathematics and Physics at other Canadian Universities, (a policy in regard to which the writer took considerable part, in some cases advising a curriculum following closely our own, in others recommending his Graduate Students for appointments in these Universities to establish Honours work along these lines to prepare students for graduate work at McGill in Physics and Theoretical Physics) - the proposed changes in what has hitherto been a joint enterprise between the Mathematics Department in Arts and the Physics Department require very careful and detailed consideration.

The writer has experienced that graduates from other Universities are better equipped mathematically to do graduate work in Physics, Theoretical Physics and Electrical Engineering than are our own graduates of recent years from either Arts or Applied Science. That our own men shouldnot be at a disadvantage in later life as research engineers or Professors of Mathematics or Physics depends very greatly on the Honours standard in the Third and Fourth Years and <u>especially on the preparation for this course from the moment they enter the Arts or Science Faculties in the First Year.</u>

The writer has therefore made careful inquiries, at the International Mathematical Congress held in Toronto last August, at the recent Washington meeting of American Mathematical Society,(of which he has recently been invited to be a member) and more recently still at Toronto University in conference with the Mathematics and Physics Departments there.

As illustrating the high and rapidly improving standard of mathematical work in the University of Toronto the following First Year Time-table for Honour Mathematics and Physics Courses in that University is herewith attached.

FIRST YEAR MATHEMATICS AND PHYSICS

University of Toronto

Mathematics.

Analytical Geometry 2 hrs. (Synge)
(Smith's Conic Sections)

Higher Algebra 2 hrs. (Stevenson)
(Hall and Knight, from exponential theory on)

Spherical Trigonometry 1 hr. (DeLury)
(Todhunter and Leatham)

Actuarial Science 1 hr. (Mackenzie)
(Interest and Bond Values - Mackenzie)

(Note - 2 hrs. of analysis, Prof. DeLury, for Pure Mathematics students only who also take all preceding subjects)

Physics

Heat 3 hrs. (lectures) (Satterly)
(Stewart and Satterly Text-book of Heat)

Mechanics 1 hr. (Satterly)
(Eggar also Wagstaff - Props. of Matter)

Calculations 1 hr. (Satterly)
(Calculus made Easy)

Laboratory 3 hrs. (General Physics principally Heat)

Chemistry

Lectures 2 hrs. (Kenrick)

Laboratory 2 hrs. (Kenrick and DeLury Lab. Manual)

Pass Subjects (Exempted from attendance if successfully passed in Senior Matriculation)

English	2 hrs.
French	4 hrs.
Latin	4 hrs.
History	2 hrs.

(Signed) George Silberstein
Jan. 23, 1925.

T The writer in collaboration with the Research Engineers of the General Electric Co. Schenectady, and consulting with American astronomers, has under consideration a plan for the development of Astonomy and Astronomical Research at McGill University. In preliminary conversations with Dr. Meldrum Stewart, Director of the Dominion Observatory, Ottawa, the possibility of the Ottawa Observatory and its resources being placed at the disposal of McGill University for practical astronomical work and research in co-o oration with the Physics Department is now being carefully and favourably considered. This is a revival of far-reaching plans for astronomical work at McGill initiated about 1901 and unfortunately dropped, althoough McGill still possesses a site of 23 acres on Westmount Mountain forthis purpose.

By ~~mai~~ maintaining in Honour Undergraduate and Graduate work a standard in Mathematics and Mathematical Physics approximating to that now in effect in Cambrigge Universiity, England the writer feels that, with the present staff and some additional assistance in routine teaching, McGill will in a few years occupy a pre-eminent position in North America not only in Physics abd Theoretical Physicsb but also in Theoretical and Observational Astronomy.

The writer therefore urges very strongly that ways and means be found not only to carry on routine teaching effectively bpt by seeking special financial assistance (Carnegie Research Council, Research Council of Canada, the Rockefeller Foundation, appealing to the liberality of Montreal citizens) to bring about, during the next few years, a broad-minded and progressive policy for making McGill scientifically pre-eminent on this continent, through the aspirations of McGill's greatest behefactor, Sir William Macdonald.

Louis V. King

167

University of Toronto
TORONTO, CANADA

DEPARTMENT OF PHYSICS

Toronto, November 27, 1920.

Dear Sir Arthur,

I am enclosing herewith some notices regarding a Conference in Physics which we propose holding in Toronto in January next. We feel that this Conference may be of special interest to the members of your staff in Physics, and I should be very glad if you could see your way clear to make the necessary arrangements to allow one or more members of your staff to attend the Conference.

I believe it is going to be a great success. I know it is going to help us, and I feel sure it will be helpful to physicists generally.

With kindest regards,

I am,

Yours sincerely,

J. McLennan

Sir Arthur Currie,
Principal,
McGill University,
Montreal.

November 16th,1923.

Dr. A. S. Eve,
Director of Physics,
McGill University.

Dear Dr. Eve:

With reference to your memorandum re arrangements recommended by you consequent on the resignation of Professor J.A. Gray, I shall recommend to the Finance Committee,-

(1) That Dr. Gray be permitted to retire on January 31st,1924;

83 1/3 (2) That Assistant Professor H.E. Reilley's salary be increased $250.00 per annum, such increase to begin on February 1st,1924;

83 1/3 (3) That Associate Professor Shaw's salary be increased $250.00 per annum, such increase to begin February 1st,1924;

166 2/3 (4) That Assistant Professor D.A. Keys' salary be increased $500. per annum, such increase to begin February 1st,1924;

433 1/3 (5) That an additional Demonstrator be engaged to begin work February 1st,1924 at an annual salary of $1,300;

166 2/3 (6) That the pension of $1,700. per annum now paid to Dr. H.P. Barnes be continued and that he receive an honorarium of $500. while he is engaged in work of a varied character which is beneficial to the University.

933 1/3

625

Sam 308 1/3

Yours faithfully,

(signed) A.W.Currie

223 MILTON STREET
MONTREAL

April 13th. 1924.

Dear Sir Arthur,

I was quite touched to receive your kind letter of the 9th., and to see that, in spite of all the work and responsibility which your position entails you found time to write to a very junior member of your staff. I am very glad indeed to remain at McGill. I owe a great deal to my old Alma Mater, but I think it was personal preference just as much as loyalty which made me refuse President Murray's offer.

It is very precious to have this word of appreciation from you, and my only hope is that I shall be able to show that I am doing my best to deserve your trust.

I remain, dear Sir,

very sincerely and respectfully yours,

Etienne L. Bieler.

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

March
Thirteenth,
1 9 2 4.

copy sent Dr. Nicholson March 17/24

Sir Arthur Currie, G.C.M.G., K.C.B.,
Principal,
McGill University.

Dear Sir Arthur,-

At a meeting of the Professors of the Physics Building, it was decided to recommend to the Principal that Mr. H. T. Pye should be termed "Instructor in Laboratory Technique" and entered as such in the Calendar on page168, after "Demonstrators". Mr. Pye is giving valuable instruction in Physics 15, page 171.

The title of Instructor would entitle Mr. Pye to be entered under "Officers of Instruction" on page 27. It would further entitle Mr. Pye to join the Faculty Club. I may point out that Mr. Pye has served the University for a large number of years, that he is one of the ablest apparatus makers in the Dominion and that his personality and character are such as would make him, in our judgment, a desirable member of the Staff and of the Faculty Club.

Yours very sincerely,

A S Eve

Director of Physics.

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

February
Eighteenth
1 9 2 4.

To -
Sir Arthur Currie, G.C.M.G., K.C.B.,
Principal,
McGill University.

Dear Sir Arthur,-

This morning before nine o'clock a fire occurred in one of the basement laboratories of the Macdonald Physics Building. The circumstances appear to indicate gross carelessness.

On Friday, February 8th, the men in charge of the rink thawed out their connections with the water pipes of the Physics Building, lighting a fire outside. This caused smoke and sparks inside the laboratory. Dr. Shaw, who was in charge, reported the matter to the college engineer and to me also on my return from Toronto. As the conversation was by the telephone, I sent the following letter to Mr. Lawrence (copy enclosed).

In spite of this, the rink men repeated their manoeuvre ~~last night~~ Friday and set fire to the woodwork inside the building. The results might have been serious but for the very prompt action of the janitor.

The claim for damages will be forwarded in due course. In the meantime, it would be a relief to learn that the rink men obtained their water elsewhere than from the Macdonald Physics Building. Until which time, I trust that more careful supervision will be exercised.

A fire in the Macdonald Physics Building would be a calamity of great magnitude, as there is much which cannot be replaced by money.

Yours very sincerely,

A S Eve

Director of Physics.

Copies sent to -

The Secretary,
McGill University,

and to

The College Engineer,
McGill University.

C O P Y.

February
Twelfth,
1 9 2 4.

W. D. Lawrence, Esq.,
Superintending Engineer,
McGill University.

Dear Mr. Lawrence,-

I believe that Dr. Shaw has already spoken to you over the telephone about smoke and sparks entering the basement of the Physics Building when the rink men thawed out their pipes; and I understand that you were good enough to tell him that this trouble would not occur again. Thank you for your kind attention to this matter.

Yours very sincerely,

(Signed) A. S. EVE.

Director of Physics.

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

January
Eleventh
1 9 2 4.

Dear Colonel Bovey,

With reference to the lecture by Dr. Ami, at the Royal Victoria College, on the twenty-second of January, I write to state that we can lend a suitable lantern and an operator. With reference to a screen, I regret to inform you that we have no suitable portable screen. This difficulty of a screen for lectures is a recurrent one - for example in the case of the Extension Lectures given by Dr. Waugh on History.

I recommend that McGill University buy a good portable screen, about 12 x 12, aluminium faced. We should be happy to take charge of this for the University in the Physics Building, but we are not prepared to pay for it out of our funds. Would you please give me authority for the immediate purchase of such a screen before January twenty-second. I think it is quite obvious that McGill University should have such a screen available, particularly with the present increase of lectures in various places both within and without the University.

Yours very truly,

A S Eve

Director of Physics.

December 18th, 1923.

Dr. A. S. Eve,
Director, Physics Building,
McGill University.

Dear Dr. Eve:-

With further reference to my letter of November 16th and your telephone message of to-day, I regret to say that owing to an oversight this matter has not yet been referred to the Finance Committee. At the same time I know I can give you the assurance that Dr. Gray will be permitted to retire on January 31st, and so he is at liberty to make his plans accordingly.

I am quite sure the other items mentioned in my memorandum will be endorsed by the Finance Committee and I authorize you in your conversations with those concerned to give that assurance.

Yours faithfully,

Principal.

To -
Sir Arthur Currie, G.C.M.G., K.C.B., Principal,
The Dean, Faculty of Arts,
The Dean, Faculty of Medicine,
The Dean, Faculty of Applied Science,
The Registrar,
The Secretary.

MEMORANDUM

MACDONALD PHYSICS BUILDING.

I am sailing for England on June 22nd, and I hope to attend the British Association meeting in September, returning shortly before the session opens. My address will be

"c/o Bank of Montreal,
9 Waterloo Place,
London, S.W.1,
England."

During my absence, the following will act as directors of the Physics Building.

June 22 - July 2 - Dr. D. A. Keys.
July 2 - August 2 - Prof. H. E. Reilley.
August 2 - August 31 - Dr. A. N. Shaw.
September - Dr. J. A. Gray

A S Eve

Director of Physics.

255 Windsor Street Station
Canadian Pacific Ry. Co.

F.L.WANKLYN,
M.INST.C.E.
M.E.I.C.
CABLE ADDRESS,
"WANKLYN".
A.B.C.CODE.

MONTREAL (CANADA)

February 3rd, 1923.

Genl. Sir A. W. Currie, G.C.M.G., K.C.B., LL.D.,
Principal, McGill University, Montreal, Que.

My dear Sir Arthur:-

I have today received a communication from Professor A. S. Eve regarding the effect of temperatures on sound, which I have duly acknowledged. I am very much obliged to you for having obtained this information for me.

With kind regards, believe me,

Yours sincerely,

F. L. Wanklyn

February
Second
1923.

Dear Sir Herbert:-

Thank you very much for the help you have given us re the X-Ray Apparatus for our Physics Laboratory.

Yours faithfully,

Sir Herbert Holt,
83 Craig Street West,
Montreal.

HERBERT S. HOLT.
MONTREAL.
CABLE ADDRESS, HERBHOLT.

30th January 1923.

General Sir Arthur W.Currie, G.C.M.G., K.C.B., LL.D.,
Principal, McGill University,
Montreal.

Dear Sir Arthur,

I am forwarding your letter to Mr.A.E.Dyment, President of the Canadian General Electric Company, telling him that I hope he will see his way to comply with your request. You can depend that I will do all I can in the matter.

Yours sincerely,

H.S.Holt

January
Twenty-seventh
1923.

Sir Herbert S. Holt,
83 Craig Street West,
Montreal.

Dear Sir Herbert:-

Through the generosity of Mr. Walter Stewart we are able to install in our Physics Laboratory an X-Ray Diffraction apparatus, which Dr. King, Macdonald Professor of Physics, requires for the further study of the micro-crystalline structure of liquids.

Professor King has examined equipment of the above mentioned type at the works of the General Electrical Company of Schenectady. He finds that that Company furnishes such equipment to educational institutions at cost price. The figures given him there are very much less than those quoted by the Canadian General Electric Company. I believe that the Canadian Company has an inclusive contract for Canadian territory, and, therefore, if we are forced to purchase this apparatus from the Canadian General Electric Company we shall have to pay a very much higher price than if it were possible to purchase the equipment from the General Electric Company.

On such equipment used in University laboratories there is no duty, although purchased in the United States, so that the difference in cost prices as quoted by the two companies must be the profit of the Canadian General Electric Company. It seems to me that the latter company might very well adopt the policy of the General Electric Company and allow University Research Departments to purchase electrical equipment at cost, in as much as the results of research often mean increased demand for electrical apparatus.

Will you please use your influence with your Company to the end that they offer no objection to the General Electric Company supplying our Laboratory with the machine it wants, and very greatly oblige,

Yours faithfully,

Principal.

January
Twenty-ninth
1923.

J. J. Ashworth, Esq.,
General Manager,
Canadian General Electric Company,
Cor. King & Simcoe Sts.,
Toronto, Ont.

Dear Mr. Ashworth:-

Through the generosity of Mr. Walter Stewart of Montreal we are able to install in our Physics Laboratory an X-Ray Diffraction Apparatus, which Dr. King, Macdonald Professor of Physics, requires for the further study of the micro-crystalline structure of liquids.

Professor King has examined equipment of the above mentioned type at the works of the General Electrical Company of Schenectady. He finds that that Company furnishes such equipment to educational institutions at cost price. The figures given him there are very much less than those quoted by your Company. I believe that the Canadian Company has an inclusive contract for Canadian territory, and, therefore, if we are forced to purchase this apparatus from the Canadian General Electric Company we shall have to pay a very much higher price than if it were possible to purchase the equipment from the General Electric Company. On such equipment used in University laboratories there is no duty, although purchased in the United States, so that the difference in cost prices as quoted by the two companies must be the profit of the Canadian General Electric Company.

It seems to me that the latter company might very well adopt the policy of the General Electric Company and allow University Research Departments to purchase electrical equipment at cost, in as much as the results of research often mean increased demand for electrical apparatus.

Will you please use your influence with your Company to the end that they offer no objection to the Ganeral Electric Company supplying our Laboratory with the machine it wants, and very greatly oblige,

Yours faithfully,

Principal.

Copy

Jan.
23rd,
1923.

A. P. S. Glassco, Esq.,
Secretary,
McGill University.

Dear Sir,-

Replying to your letter of January 8th, in connection with Mr. Walter Stewart's gift of $3,500 for the purchase of a General Electric X-Ray Diffraction Apparatus, I may say that I have just returned from making inquiries at the Schenectady Research Laboratory.

Dr. Hull confirms me in my opinion that this equipment, with adaptations which we can make in our own workshops, is best suited to the study of the micro crystalline structure of liquids.

On making inquiries from Dr. Douane, Professor of Biophysics at the Harvard Medical School, I find that equipment of this type is supplied by the G, E. Co. of Schenectady at cost prices to educational institutions. The prices quoted to me were very much less than those quoted by the Can. G. E. Co., accompanying the specifications sent to you some time ago. On making inquiries from Mr. H. V. D. Allen, in charge of Canadian sales for the International G. E. Co. of Schenectady, I find that the Canadian company has an inclusive contract for Canadian territory, made many years ago without consulting the needs of universities, at a time when it could not be foreseen that research work would be seriously embarrassed, both as regards high costs and great losses of time, incurred by this arrangement. I was advised to consult with the general manager, at Toronto, Mr. J. J. Ashworth, with a view to having this needless chain of communication shortcircuited,

To : A. P. S. Glassco, Esq.,
January 23rd 1923.

inasmuch as the Canadian representatives are of no service to us for this class of equipment. There is no reason why university research laboratories should not be able to deal directly with the Schenectady company who are prepared to supply us with equipment at the s same university prices as are allowed to American research laboratories.

I enclose a list of the directors of the Can. G. E. Co. and notice the name of one of our own governors, Sir Herbert Holt. May I suggest that you bring this letter to his attention, in order that some special clause assisting Canadian Universities be provided in regard to research equipment? I expect to spend a few days in Toronto in the course of a fortnight or three weeks, and shall take the occasion of consulting the General Manager.

In the meantime, the Schenectady company have given me an option on an equipment nearing completion for a month, or more if necessary, pending agreement as to prices payable in Canada.

With kindest regards, I am,

Sincerely yours,

Macdonald Professor of Physics.

CANADIAN GENERAL ELECTRIC COMPANY

LIMITED

Toronto, Ont.
Cor. King & Simcoe Sts.

Directors

A. E. Dyment, President

Stephen Haas, Vice-President
J. J. Ashworth, General Manager

George W. Beardmore
H. C. Cox
Col. The Hon.
Sir J. S. Hendrie, C.V.O.
F. Gordon Osler

Sir Herbert Holt
Sir James Lougheed, K.C.M.G.
W. L. Matthews
Sir William MacKenzie
W. G. Ross
W. D. Ross

copy to the Principal

January
Twenty-fifth
1923.

Dear Dr. King:

I acknowledge with thanks receipt of your letter of January 23rd, in which you inform me as to what you have been doing in regard to the X-Ray apparatus.

I discussed this letter with the Principal this morning, and he has asked me to obtain from you the figures showing the cost of this apparatus complete if we can arrange to purchase it directly from the G.E. Company of Schenectady.

The Principal said that he would be glad to write Mr. Dyment and Sir Herbert Holt bespeaking their good offices in the matter of having a clause inserted in the present agreement between the Schenectady Company and the C.G.E. covering research apparatus for Universities in Canada.

Yours faithfully,

(signed) A.P.S. Glassco.

Secretary

Dr. Louis V. King,
Macdonald Professor of Physics,
Physics Building.

McGILL UNIVERSITY

MONTREAL

THE MACDONALD PHYSICS BUILDING

Jan.
23rd,
1923.

Sir Arthur Currie, G.C.M.G.,
Principal,
McGill University.

Dear Sir Arthur,-

I have just returned this morning from a delightful day at Schenectady and enclose a reply to Mr. Glassco's letter of the eighth instant which explains itself.

With regard to a radiological outfit of higher voltage, which Mr. Stewart desired me to look into, I may say that a 200,000-volt plant is now being developed by the General Electric Research Laboratory and will be available for purchase in the course of a few months. The most important item is a 200,000-volt transformer (about $4,000 U.S.). The remainder, designed to rectify the alternating current, is much less costly (about $1,500 U.S.). In the high tension laboratory of the McGill Electrical Department there is already installed a 300,000-volt transformer. I should suggest that the most economical course to pursue is to co-operate with this Department in the new building, so that the addition of the rectifying equipment may be available for the research work of the two Departments.

The view which I have always maintained in regard to the provision of additional space needed by Physics and Electrical Engineering is a new building on the site of the Forest Products Laboratory, to include the much-needed extension to the Physics Building, and to accommodate as well the Department of Electrical Engineering, a large new lecture theatre being made available for both Departments. In view of the development of the Graduate School and the extension of physical research work, this would relieve the Macdonald

To - Sir Arthur Currie, G.C.M.G.,
Principal, McGill University,
January 23rd, 1923.

Physics Building of its present congestion, and enable it to carry out in more adequate fashion the plans of its original benefactor.

In conclusion, I may say that Drs. Coolidge and Hull wish me to say, on behalf of the General Electric Company, that they will be delighted to meet and entertain any friends of the University who may wish to spend a day, at any convenient time, studying the practical development of modern scientific research work at Schenectady.

With kindest regards, I am,

Sincerely yours,

Louis V. King

Macdonald Professor of Physics.

N.B. Mr Stewart may be interested in seeing either or both of these letters if you see fit to send them on to him.

The dinner to Dr Chant at the University Club Friday evening next is at 6^15 P.M. instead of 7^30 as I mentioned in your office Saturday last.

CANADIAN GENERAL ELECTRIC COMPANY
LIMITED

Toronto, Ont.
Cor. King & Simcoe Sts

Directors

A.E.Dyment, President
Stephen Haas, Vice-President
J.J.Ashworth, General Manager

George W.Beardmore
H.C.Cox
Col.The Hon.
Sir J.S.Hendrie, C.V.O.
F.Gordon Osler

✓Sir Herbert Holt
Sir James Lougheed,K.C.M.G.
W.L.Matthews
Sir William MacKenzie
W.G.Ross
W.D.Ross

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

Nov.
16th,
1922.

Sir Arthur Currie, K.C.M.G.,
Principal's Office,
McGill College.

Dear Sir Arthur,-

You will remember that, at the recent meeting of the Macdonald Physics Building Committee, we discussed the possibility of the purchase of X-ray apparatus for Dr. L. V. King. The total sum required is $3,500, a sum which is too large for us to find from our annual appropriations. After careful consideration, I forward to you the statement sent by Dr. King, and the estimate from the Canadian General Electric Company.

During the past two or three years, we have not spent our full appropriations by a sum amounting, I believe, to several thousand dollars. The exact magnitude is, however, not known to us.

If the University can purchase this apparatus for Dr. King I think that it would be money well spent, as it would enable him to prosecute further a line of investigation at which he is having a considerable amount of success.

If the Finance Committee is unable to find the money for a special grant of this kind, do you think it possible that some private benefactor might be able to donate it to us?

With Dr. King's general point of view that graduate and research work should be developed in the University to

To - Sir Arthur Currie, K.C.M.G.,
November 16th, 1922.

the highest possible extent, I know that you and the Governors are in hearty sympathy, the only difficulty being the just division of all possible ways and means amid the rival claims for development.

Yours very sincerely,

A S Eve

Director of Physics.

STATEMENT ON EQUIPMENT OF LABORATORY

FOR

GRADUATE RESEARCH.

In view of the establishment at McGill University of a Graduate School, the writer submits herewith a statement on the needs of graduate and research work in Physics.

Owing to financial stringency during the past fifteen years, the equipment for research and graduate teaching of the Physics Department requires the purchase of new equipment, enabling a number of research students to pursue work in modern Physics.

Arrangements have been made for the routine work in Electrical Measurements to be taken over in the newly constructed Department of Electrical Engineering. This releases the present Electrical Measurements Laboratory for graduate work in Physics, preparatory to independent research work. In the space thus released, it is proposed to establish the apparatus and equipment with which research work in fundamental fields may be carried out.

A workshop is now in the course of being fitted out and will be completely equipped by the end of the present session.

The field of work on which the writer has been engaged until quite recently (fog alarm researches, submarine signals, etc.) is now nearly completed, insofar as laboratory work is concerned. The final reports are in the course of preparation and it is hoped that future work on an engineering scale will be taken up by the Government Departments concerned.

Preparations have thus to be made for a new field of research. It is proposed to establish in the laboratory a modern source of X-rays, suitable for the study of molecular structure in liquids, along which lines the writer has been engaged on theoretical work requiring confirmation. A quotation on this equipment has been received from the General Electric Company, and is included herewith. With this apparatus in the Graduate Laboratory it becomes possible to carry out a large number of investigations of a fundamental type and to assign to graduate students research work on modern topics.

It is felt that means should be provided from time to time for renewing research equipment to meet the rapid progress of Physical Science, and in the course of a few years to have this laboratory known as one of the best equipped in America. In order to pursue this plan successfully, and see it realized five years hence, it is necessary to be able to plan now.

Unless this is done and the fact known abroad, the Physics Graduate School of this University will not be in a position to compete for graduate students with the corresponding departments in American and other Canadian Universities, where research appropriations and special endowments for research work make it possible for those laboratories to attack with sufficiently powerful weapons the problems confronting the physicist of today.

GRADUATE SCHOOL LIBRARY.

In connection with the Graduate School, there is a further need of extensions to the Library in the matter of current scientific periodicals, and more especially of back numbers of several important sets.

Nov. 17th/22.

Louis V. King.
Macdonald Professor of Physics.

167

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

June
10th
1922.

Sir Arthur Currie,
Principal's Office,
McGill College.

Dear Sir Arthur,-

On Wednesday the fourteenth of June, I am going to Guysborough, Nova Scotia.

During my absence, the successive Acting Directors of the Macdonald Physics Building will be

Dr. J. A. Gray
Dr. A. N. Shaw
Professor H. E. Reilley.

Yours very sincerely,

A S Eve

Director of Physics.

MCGILL UNIVERSITY.

June 2nd, 1921.

MACDONALD PHYSICS BUILDING.

The Principal,
McGill University.

Dear Sir Arthur:-

I propose to go for a holiday on the 15th of June, my address will be Guysborough, N.S. During my absence, the Acting Directors of the Physics Building will be, 15th - 30th June, Dr. J.A. Gray, July, Dr. A.N. Shaw, August, Professor H.E. Reilley,

Yours very sincerely,

A S Eve

To Mr Glassco.
Please note. pass to Dr. Nicholson
who will return to my office
6/6/21 A W Currie.

November
Twenty-fourth
1920.

Professor A. S. Eve,
Physics Building.

Dear Dr. Eve:-

I shall gladly attend the meeting of the Physics Building Committee on the 4th of December, and I think we had better agree upon 4 p.m.

Yours faithfully,

Principal.

From the time of its foundation the Department of Physics at McGill University has attracted the attention of the whole scientific world by a series of brilliant researches which have been carried out in the Macdonald Physics Building by a succession of distinguished men of science who have occupied the Professorships in this department - researches which have advanced our whole knowledge and conception of the constitution of matter and the laws of the Universe.

Of these men Professor Ernest Rutherford is worthy of a foremost place. His investigations in the field of Radioactivity were of a character so striking and far reaching that he became at once the leader in breaking into this new world of scientific knowledge, and at the completion of nine years of continuous work at McGill University, and having refused in succession the appointment of the headship of the Department of Physics in several of the foremost universities of the United States, he was called to be head of the Department of Physics in the University of Manchester as a stepping stone to the Professorship of Physics in the University of Cambridge which he now holds and which is recognized as the leading professorship in this department of science in the English speaking world. He attracted to McGill a band of younger men whom he associated with him in his work, and many of whom have since achieved marked distinction among whom may be mentioned Dr. Soddy, now at the University of Oxford, Professor Eve now head of the Department of Physics at McGill University, who rendered such excellent service during the war in the invention of methods for submarine detection, and Professor Louis Vessot King of the same Department, whose recent work on Fog Signalling in the Gulf of St. Lawrence has attracted such widespread attention, also Professor Boyle, now at the University of Alberta, Professor McClung, now at the University of Manitoba, and many others who flocked to the Laboratories of McGill University, not only from the United States and Britain but from Germany and other parts of the Continent of Europe, to study with him.

Other men of marked distinction have carried out researches in this Department at McGill in other lines of work. Professor Calendar in the accurate measurement of high terperatures, Professor Barnes on the properties of ice and the conditions preventing its formation. the names of Professor Cox & Professor (now President) Tory, ~~and many~~ should also here be mentioned as well as those of ~~others,~~ Dr. Shaw, Dr. Grey and other younger men in the McGill Department of Physics are now engaged in research work of importance and who promise to carry on worthily the traditions of old McGill. ~~in Physics in a manner worthy~~

In the Department of Electrical Engineering which in many ways is related to the Department of Physics, the work of Professor Owens, Professor Herdt, and Brig.-General McNaughton is widely known.

From the Chemical Laboratories of the University also there has issued a continuous series of contributions to Chemical Science from the time of Dr. Harrington to the present day when under Dr. Ruttan there is a group of able young investigators who are engaged in the study of various recondite problems in this science which lies at the foundation of modern industry.

In the Natural Sciences McGill has also occupied a foremost place in the world of research. Professors Penhallow and Lloyd in Botany, Professor Willie and Dr. Stafford in Zoology - have made most important contributions to the knowledge of their respective sciences. In Geology the work of Sir William Dawson covered many fields and is well known to all, that of his successor in the Logan Chair of Geology, on the ancient crystalline rocks of Canada, on the problems of metamorphism, the origin of ore deposits, and more recently on the elasticity of rocks,(with Dr. Bancroft), and their deformation and flow under great pressures, has thrown light upon many questions bearing upon the development of the earth and has received widespread recognition.

In various branches of Engineering McGill has also made important original contributions to the fundamental principles of the respective sciences. Among these may be mentioned the researches of Professor Nicholson on the conditions which obtain in the cylinders of a steam engine when in operation contributed largely to a true understanding of this prime mover. The work of Professors Porter and Durley on Canadian coals and the most efficient methods of their utilization was a most valuable investigation carried out for the Dominion Department of Mines. The work of Dr. Coker, now Professor of Mechanical Engineering in University College, London) on action of metals under stress - and that of Professors Mackay and Brown and Mr. Batho on the deformation of bridge members under stress, and other problems carried out in the Testing Laboratories of McGill University, may be referred to.

The work of Dr. Stansfield on the Electric Furnace and its adaptation to modern needs is well known.

In addition to these investigations which represent actual advances of science by research into the unknown and which are, therefore, of world-wide value, the staff of McGill University have contributed to the development of the Dominion ~~of Canada~~ through ~~itself in~~ their services on many Government Commissions and Boards, such as the Commission of Conservation, the Council for Scientific & Industrial Research, Civil Service Commission, various War Boards, &c. &c.

McGILL UNIVERSITY
MONTREAL.

THE MACDONALD PHYSICS BUILDING.

February 6, 1920.

Dr. F.D. Adams,

Dear Dr. Adams,

I did not call a Physics Building Committee yesterday, as there was nothing to report or to decide, since our last meeting.

Mr. E.S.Bieler may stand for the 1851 Exhibition. He would be an excellent representative.

Mr. A.A.Scott has decided to leave at the end of April to join as Physicist the Abitibi Paper and Pulp Co.

I found that he was determined to go even if we had offered him an Assistant Professorship at $2500.

It will be hard to replace two such excellent demonstrators next year.

Yours sincerely,

A S Eve

McGill University.

Macdonald Physics Building.

Montreal, Nov. 1st. 1919

Dr. R.F.Ruttan.

Dear Sir:-

The Registrar asks for the Macdonald Physics Building Committee Report before 10th November. A draft is enclosed for your consideration.

(1) Do you approve this draft please?

(2) or what correction do you suggest?

(3) Do you want a meeting 5 p.m. Tuesday 5th Nov. to consider this report?

Engaged

Yours sincerely.

A S Eve

Report of the Physics Building Committee.

For 1918-1919.

The attendance at lectures and laboratories at the commencement of the session in 1919 was as follows

Faculty of Arts	209
Commerce	75
Faculty of Applied Science 1st year	280
2nd year	165
Faculty of Medicine	275

Total 1004

The Physics Building, with a single staircase, and with but one door to the theatre, has neither elementary laboratory nor lecture accommodation for such large numbers. Hence a definite future policy is essential if teaching is to be rendered efficient.

If there is rigid restriction of numbers in all faculties, with admission purely by merit, a great stimulus will be given to Education both in the Province and Dominion.

Failing such action the following courses may be recommended in order of arrangement.

(1) The erection of a new Physics Building near the Redpath Library. The existence of the tunnel beneath the Campus may however render such a site impracticable.

(2) A new large lecture theatre and elementary laboratory in close proximity to the present Physics Building preferably near the present Forest Products temporary buildings.

(3) A large theatre and laboratory at the South end of the old Medical Building. This would present grave difficulties as the buildings would be so far away as to lead to duplication of apparatus and increase of staff.

(4) The present lecture Theatre in the Physics Building should be entirely reseated for increased numbers, and the top floor rearranged for an enlarged elementary laboratory This would be a temporary expedient.

It may be noted that the present difficulties involving duplication and even triplication of lectures, began to be accentuated when the Faculty of Medicine sent their students of the first year to the Physics Building. Their urgent requirements are not now met. In the meantime the Governors endeavoured to meet the immediate requirements by a liberal grant for an increase of equipment, apparatus and supplies.

The illustrious physicist, Sir Ernest Rutherford, whose researches at McGill University will have lasting fame, has been appointed to the Cavendish Chair of Physics at the University of Cambridge.

Dr. Howard T. Barnes, F.R.S., former Director of Physics, has been placed on the retired list owing to ill health. His work on Ice, and his researches in Heat, have been a notable contribution to Science.

Dr. A.S. Eve, C.B.E.,F.R.S, absent for four years in connection with various war activities has been appointed Director of Physics.

Dr. L.V. King was this year President of the Section of Mathematics and Physics at the meeting of the Royal Society of Canada at Ottawa. He has contributed to the Transactions of the Royal Society of London a valuable monograph on his researches on fog-signals

Dr. A.J.Gray has returned to his duties as Associate Professor of Physics after four years absence in France and

England. His work in connection with Sound Ranging has received highest praise from the most competent authorities.

Dr. A.N.Shaw has had his appointment as Associate Professor confirmed. At a time of stress he was temporarily transferred from Macdonald College.

Mr. J.H.Henderson, research fellow from Delhoresie, demonstrator in Physics has proceeded to Cambridge University with an 1851 Exhibition.

Mr. L.E.Bieler has returned after serving in France and also carrying out Scientific work for the Admiralty.

Miss L.A.Smith formerly of McGill University has returned as demonstrator after a year's experience at the University of Alberta.

Improvements have been made in the lighting and ventilation of the building by the Bursar and Mr. Lawrence.

The Scientific Library and apparatus of Dr. H.J.Barnes, together with the model of the ice breaker "Tarmo" have been purchased from the Physics Building appropriations. The library has been reorganised and will prove a valuable stimulus to sound teaching and research work.

The number of demonstrat~~ions~~ors is not yet sufficient to cope with the work, but ~~many~~ more men are not at present available. The purchasing of such apparatus as is necessary to render the Physics Department efficient must be a gradual process spread over several years, as prices are at present excessively high, and manufacture is still far from normal.

Grants from the Honora~~es~~ry Advisory Council for Scientific & Industrial Research have been and are a great assistance and stimulus.

Unfortunately there are not men at present available for bursaries, studentships and fellowships. It will take four years to secure the normal supply of honour and graduate students

Meanwhile the progress of Physics, both theoretical and applied, has continued throughout the world on a phenomenal scale, and future advanc~~ement~~s are likely to have a profound influence on a country with such great natural resources as Canada.

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

21. 12. 26

Dear Sir Arthur,

There is diversity of custom as to the ending of lectures. Apparently some lectures stopped on Saturday, whereas the Calendar states that lectures continue until this Tuesday night.

Those who continue are put into rather an embarassing position, and it is therefore desirable that all should stop at the same time.

My trouble is that I am not sure who stops before time, and I am not anxious to give evidence, even if correct, against my colleagues. Perhaps joint action of the Deans might solve the difficulty.

Yours very sincerely

A S Eve

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

17 December 1926

Sir Arthur Currie,
Principal of McGill University.

Dear Sir Arthur,

Will you please accept my apologies for failing to attend the "Universities Conference" yesterday afternoon, a subject in which I am greatly interested.

I became involved in an interesting problem after lunch at home and the engagement entirely slipped my memory, for which, of course, there is no excuse.

Yours very sincerely,

A S Eve

December 17th, 1926.

Dear Professor Eve:-

With reference to your note about yesterday's meeting, you will not forget what I told you to-day. The Committee is meeting again in the early part of January in order that we may recommend certain subjects for discussion at the Conference of Canadian Universities which this year is likely to meet in London during the first days of June.

Yours faithfully,

Principal.

McGILL UNIVERSITY

MONTREAL

THE MACDONALD PHYSICS BUILDING

18 June 1926

Sir Arthur Currie,
Principal McGill University,
Montreal.

Dear Sir Arthur,

I am leaving Montreal for a holiday from Monday June 21 to about July 20.

My telegraphic address is Eve, Magpie, Que.

During my absence Professor Reilley and Dr. Shaw will in turn act as Directors of the Physics Building and carry on all necessary business.

Yours very sincerely,

A S Eve

The Macdonald Physics Building
McGill University

Montreal
May 5th, 1926.

The Principal, Sir Arthur Currie,
Dean Ira Mackay, Faculty of Arts,
Dean C. F. Martin, Faculty of Medicine.

Gentlemen,

In the proof-sheets of the Calendar for the Session 1926-27 there is a useful summary entitled -

"Pre-professional Courses"

In the First Year there is Physics, and in the Second Year Physics is made an option with Philosophy or Psychology.

The Department of Physics wishes to place on record the fact that students who take the First Year Physics in Arts only will not be sufficiently prepared in Physics to proceed to the Faculty of Medicine. The First Year course is given to a large number of students in the Faculty of Arts and is of a very general nature to explain as far as possible the elementary principles of Mechanics, Heat, Light, Sound and Electricity. It is scarcely possible for any student to obtain an adequate grasp of so many subjects in a single year. It is necessary to bear in mind also that in the subject called "Physics" in the High Schools of this province covers Mechanics and Heat only. Moreover many students come to us who have done no Physics at all. It is therefore recommended that, in the course for the Second Year, Physics shall not be an optional subject but that students shall be required to take the course called "Physics 1M" with "Physics 1" as a prerequisite in order that they may go forward with an adequate equipment for their Medical career.

It may be noted that in the case of Chemistry two years are now given to the subject, the first year being Organic and the second year Inorganic Chemistry.

It is further to be noted that First Year Physics is only a two hour subject in the lecture theatre and a two hour subject in the laboratory and this would be regarded as wholly insufficient by such bodies as The Rockefeller and Carnegie Institutes.

It is very desirable that the Faculty of Medicine should clearly make up their mind whether they do or do not want Physics 1M. If they do not we will cancel the course, but it would be contrary to the professional judgment of myself and my colleagues in this Department.

Yours very sincerely,

A S Eve

May 7th, 1926.

Dr. A. S. Eve,
Physics Building,
McGill University.

My dear Dr. Eve:-

I have your letter of the 5th of May, making a protest on the part of the Department of Physics with reference to the announcement in the Calendar re pre-professional courses.

I think you are quite right in putting your department on record and it may be that we are making a mistake, but I have consulted the Department of Medicine on more than one occasion with reference to this matter. They assure me that the arrangements as set forth in the Calendar for next year are quite satisfactory to them and that they want nothing more. We shall have to see how the present plan works out.

Yours faithfully,

Principal.

May 19th, 1926.

Dr. A. S. Eve,
Physics Building.

My dear Dr. Eve:-

I was delighted to see in this morning's Gazette what you have confirmed by your letter of the 18th that Dr. Foster an International Research Fellowship. I have already written him a brief note of congratulation. Certainly the suggestions offered in your letter will be observed, namely, that he has permission to remain away until the beginning of the University work next January and his salary will be paid as usual.

I am also glad to see that Mr. ~~Hatcher~~ Hackey has been promoted.

Yours faithfully,

McGILL UNIVERSITY

MONTREAL

THE MACDONALD PHYSICS BUILDING

May
Eighteenth
1926

Sir Arthur Currie,
Principal McGill University,
Montreal.

Dear Sir Arthur,

My colleague Dr. Foster has been awarded an International Research Fellowship by the International Educational Board. This will enable him to proceed to Copenhagen to work with Professor Niels Bohr and others on the Stark Effect. He will go there at the beginning of August, taking in the British Association at Oxford on his way.

The amount of the Fellowship is $500 with all travelling expenses. I am very anxious that he should take full advantage of this great opportunity which will undoubtedly enable him to assume a very leading position on this continent in the matter of the Stark Effect and allied problems in spectroscopy. I therefore ask your permission for him to remain until the end of the year and it will be a great pleasure to his colleagues here to divide up his work in such a way that the instruction at McGill will not suffer. It may be necessary for him to pay a demonstrator for the months of October, November and December to cover some of the work which he will not be able to do, so that $240 of his $500 might be absorbed in that way. In the meantime, however, his family will be in Montreal and I trust that you will permit his full salary to continue as usual.

I am very delighted at this honour which has been conferred upon him.

You will also be interested to hear that one of our young demonstrators, Mr. Hachey, has an appointment as Professor of Physics at the University of New Brunswick.

H. B. Hachey

Yours very sincerely,

A S Eve

McGILL UNIVERSITY
MONTREAL

FACULTY OF MEDICINE
OFFICE OF THE DEAN

M a y
Eleventh,
1 9 2 6.

Sir Arthur Currie, G.C.M.G.
Principal - McGill University,
M o n t r e a l.

Dear Sir Arthur,

I am sending herewith a copy of a letter received from Professor Eve, and also copy of my reply, for your information.

Very sincerely yours,

C.F.Martin.

DEAN.

C O P Y.

The Macdonald Physics Building.

May 8th, 1926.

Dr. C. F. Martin,
Dean of the Faculty of Medicine,
McGill University.

Dear Dr. Martin,

I enclose a copy of a letter received from Sir Arthur Currie in reply to my letter of which I sent you a copy a few days ago.

We, of course, accept the decision of the umpire without reserve, but my question is not yet answered as to whether you wish us to wipe out Physics 1M or not. We do not wish to waste time over an unnecessary course, though certainly we deem it advisable that all students should take it. It can be left, if you desire, an optional course. In any case, I should be glad if you would give me an opportunity at the next meeting of the Faculty of Medicine to make all the members of the Faculty aware of the situation, because, in my judgment, we are embarking on a course of instruction in Medicine which is absolutely unsound in its scientific foundations, and this should not be done without the whole of the Faculty being fully aware of the situation.

Yours very sincerely,

(Signed) A. S. EVE.

Copy for the Principal.

May 10th, 1926.

Professor A. S. Eve,
Department of Physics,
McGill University,
M o n t r e a l.

Dear Professor Eve:-

Many thanks for your good letter of May 8th, enclosing one, dated the 7th, from Sir Arthur Currie.

The point which we wish to make in the Medical Faculty is simply this:- We do not for a moment presume to dictate to the Faculty of Arts on the subject matter of their curriculum. We can only specify as to what are the requirements in the Faculty of Medicine. It has been decreed that the premedical requirements cover a period of not less than two years. Where this minimum is adopted, we do not feel justified in allotting more than one year of this time to Physics - else other subjects will be neglected. On the other hand, if a three year premedical course is taken, as now occurs in the double courses leading to the degree of M.D., we quite concur that two years of Physics would be an advantage.

Under existing conditions, I cannot see why Physics 1-M would not afford all that is desired for the medical students if it were given, as was the case a few years ago. At that time students were admitted without a previous knowledge of Physics and were given a comprehensive course in one year.

Nothing is further from our wishes than that you should wipe out Physics 1-M. On the contrary, we would like to express the hope that that course might be so modified as to permit students of the first year taking it.

Should you find it quite impossible to modify Physics 1-M in accordance with the above suggestion, I still feel that the Faculty would be obliged to remain content with Physics 1 covering one year's work, as we cannot overload the two year premedical curriculum with the subject of Physics. I may say that the main disadvantage in such a step would be that students of McGill who have taken the premedical course would come to the Medical School perhaps less adequately prepared in Physics than those from the majority of other Universities, where a more comprehensive course in Physics is given in one single year to premedical students.

With reference to your fear that the Rockefeller Foundation might not view with favour our insistence that Physics in the premedical course be confined to one year, I may say that neither the Rockefeller nor the Carnegie Foundations make any stipulation as to the amount of time required in the premedical subjects. Even the most stringent regulations of the State Boards in the United States do not require more than six hours per week over half a year in Physics; and we do not, therefore, fear any adverse criticisms from those sources.

I can only express the hope of practically all the members of the Faculty that you may still see your way to modifying the course 1-M to meet the needs of our Medical Faculty.

In conclusion, I need not add that we will, of course, welcome any statement you care to present at the next Faculty meeting.

Very sincerely yours,

C F Martin.

DEAN.

McGILL UNIVERSITY

MONTREAL

THE MACDONALD PHYSICS BUILDING

March
Fifteenth
1926

Sir Arthur Currie,
Principal McGill University,
Montreal.

Dear Sir Arthur,

This is rather an interesting side-light on the effect of our American Physical Society meeting - a cordial letter to Professor Reilley from Mr. Carter of the Bell Telephone Laboratories, New York, who was discussing with him many interesting problems, practical and theoretical, on the measurement of sound, on the sound-proofing of buildings and on the absorption of sound by different materials.

Yours very sincerely,

ENCLOSURE

A S Eve

C O P Y

195 Broadway, New York,
March 12, 1926

Professor H. E. Reilley,
Macdonald Physics Building,
McGill University,
Montreal, Canada.

Dear Professor Reilley;

I have reported the Montreal meeting of the American Physical Society as the most thoroughly enjoyable one in every way that I have yet attended. The atmosphere of the meeting seemed to promote easy and pleasant social contacts, which I dare say are more important in a meeting than specific scientific information gained. Such an atmosphere could only be the result of careful plans on the part of the Department of Physics of McGill University. I am writing to ask you to accept my gratitude and appreciation.

I wish, too, to express my pleasure in having made your acquaintance. I hope it can be fostered at further meetings and that you will call on me when in New York for any assistance I can give. In particular, it would be a pleasure to introduce you to anyone at the Bell Telephone Laboratories in whose work you have an interest.

I am

Yours very sincerely,

(signed) CHARLES W. CARTER, JR.

March 11th, 1926.

My dear Dr. Eve:-

With reference to your letter of yesterday re Mr. Walter Stewart's recent gifts to the Physics Department, I am attaching herewith copies of letters which were sent to him in acknowledgment.

The gifts were reported at meetings of the Finance Committee and also at meetings of the Board of Governors. I should not be surprised if some mention had been made in the press at the time. Certainly, so far as Mr. Stewart is concerned, every necessary acknowledgment was made to him.

I sincerely hope you will make some effort to trace the source of your information and inform the parties that there is no ground for any possible complaint.

Yours faithfully,

Dr. A. S. Eve,
Director of Physics Building,
McGill University.

McGILL UNIVERSITY

MONTREAL

THE MACDONALD PHYSICS BUILDING

March
Ninth
1926

Sir Arthur Currie,
Principal McGill University,
Montreal.

Dear Sir Arthur,

You will recall that Mr. Walter M. Stewart made two gifts of money to the Macdonald Physics Building for expenditure on apparatus; one of these went to the General Fund and the other was ear-marked for Dr. King's expenditure on special apparatus. We were enabled, owing to this kindness, to obtain apparatus of a valuable character, which is constantly in use and very beneficial.

These gifts were duly acknowledged in the Annual Report under the Department of Physics, but I learned recently, in rather a roundabout way, that these gifts had not been reported to the Governors and possibly were not acknowledged in any other fashion than that above indicated. I am not sure whether Mr. Stewart really wishes such acknowledgment to be made or not, but it would be very unfortunate if there was any lack of appreciation of his generosity and I therefore venture to bring this point to your notice for consideration please.

Yours very sincerely,

A S Eve

To Sir Arthur Currie

BELL TELEPHONE LABORATORIES
INCORPORATED
463 WEST STREET
NEW YORK

March 1, 1926

IN REPLY REFER TO
KKD-324-EP
REPLYING TO

PROFESSOR A. S. EVE
McGill University
Montreal, P.Q.
Canada

Dear Professor Eve:

As a member of the Physical Society and the Optical Society, I want to express my appreciation of the generous and delightful reception which your University accorded to us. I am sure that everyone who came to the Montreal meeting will always remember it as an unique event.

If you think that it would please the Chancellor and Governors of the University I should be glad to write them a letter or to have this one transmitted to them.

I enjoyed the privilege of the several conversations I had with you and hope to meet you again soon in Washington or Oxford.

Very sincerely yours,

Karl K. Darrow

P:M:

J. B. HARKIN,
COMMISSIONER

NATIONAL PARKS
MIGRATORY BIRDS CONVENTION ACT
HISTORIC SITES
TOWN PLANNING

DEPARTMENT OF THE INTERIOR

CANADA

CANADIAN NATIONAL PARKS

OTTAWA

IN YOUR REPLY REFER TO FILE PERSONAL.

November 25, 1925.

Dear Colonel Bovey,

Some time ago when you were in Ottawa you kindly offered to consider having Dr. A. S. Eve give the opening lecture of the Museum series this winter. I passed on the information to the Acting Director of the Museum at the time, but it now appears that an unavoidable delay in arranging the lecture programme will prevent the acceptance of your very kind offer. The Acting Director of the Museum has asked me to convey this information to you and express his appreciation of the courtesy that you have extended. I am sure that McGill's generous offer in this connection will be kept in mind and possibly made use of at a future date.

Yours very truly,

Hoyes Lloyd

Hoyes Lloyd,
Supervisor,
Wild Life Protection.

Colonel Bovey,
Ass't to the Principal,
McGill University,
Montreal, P. Q.

February 23, 1925.

Sir Arthur Currie,
Principal, McGill University.

Dear Sir Arthur:-

I was at Ottawa on Saturday at an Air Research Committee Meeting. I invited Dr. Stewart of the Observatory to lunch with me in order to talk over possibilities. The offer of the liaison between McGill University and the Ottawa Observatory is a genuine one which might prove of advantage to both parties in the future.

Would it not be wise to form a small Committee at McGill to consider this matter at an early date? I hope that you will not think me going too far if I suggested possible names for the Committee, yourself, representatives of the Governors, Dr. King, Prof. Gillson, Dr. Murray, Prof. Kelly and myself.

I will not trouble you with any of the details which may be placed before the Committee.

Yours very sincerely,

Director, Department of Physics.

February 18, 1925.

Sir Arthur Currie,
Principal, McGill University.

Dear Sir Arthur:-

Yesterday I saw a letter written by Dr. Meldrum Stewart to you concerning a possible liaison between McGill University and the Ottawa Observatory. This offer is of course a magnificent one and opens up possibilities which we could not possibly achieve under an expenditure of something like $100,000 a year, which would be required if we had an Observatory of our own. Indeed it makes possible the establishment of a Department of Astronomy at a moderate cost, for we have at McGill in Professor Gillson a man who may justly be termed an eminent astronomer, more particularly in that branch of dynamical astronomy which is weak on this continent.

A possible scheme would be to introduce, for Honour Students only, a three hours' course in the Third Year and two courses of three hours in the Fourth Year. Students would receive their practical instruction during the summer in Ottawa.

If this were done the only additional expense would be the appointment of another lecturer in Mathematics so as to free Professor Gillson for half his time to teach Astronomy. It is possible he might require some assistance from Miss Douglas, who would then deserve a remuneration. Thus the total expenditure may be estimated at the cost of a lecturer, about $2,500 or $3,000 a year. The result achieved for so moderate a sum would be large and is well worthy of consideration.

Yours very sincerely,

Director of the Department of Physics.

September 28th, 1925.

Dr. A. S. Eve,
Director, Physics Building,
McGill University.

Dear Dr. Eve:-

Many thanks for your note of the 24th.

I shall try to get the committee together in the very near future.

Yours faithfully,

Principal.

September 28th, 1925

Dr. R. F. Ruttan,
Director, Department of Chemistry,
McGill University.

Dear Dr. Ruttan:-

Will you be good enough to attend a committee meeting in the Principal's Office on Thursday, October 1st, at 4.30 p.m.

The meeting will consider matters in reference to future arrangements in the Department of Physics.

Yours faithfully,

Principal's Secretary.

Dr. Eve,
Dr. H. M. Mackay,
Dr. I.A.Mackay,
Dr. O. Maas,
Prof. Gillson
Dr. D.A.Keys.

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

September
Twenty- fourth
1925

Sir Arthur Currie,
Principal McGill University,
Montreal.

Dear Sir Arthur,

I have written to Laski for the address which you desired and I have also written to my old friend Sir William Bragg for his advice.

Enclosed is a list of names placed before you for consideration as suitable for a Selection Committee.

Yours very sincerely,

A S Eve

Sir Arthur Currie, Principal

Dr. R. F. Ruttan, Dean of the Graduate Faculty

Dr. A. S. Eve, Director Department of Physics

Dr. O. Maass, Physical Chemistry

Professor A. H. S. Gillson, representing Mathematical Physics

Dr. D. A. Keys, representing Physics.

I MacKay.

II do

ASE

25.5.28.

Deans Thu 4

Above " 4.30

October 8th, 1925.

Dr. A. S. Eve,
Department of Physics,
McGill University.

Dear Dr. Eve:-

Thank you very much for sending me Dr. Frost's observations re the work of Miss Douglas. I am very glad to see this further testimony of her worth.

I wish we could make a beginning in the matter touched upon in your closing sentence.

Yours faithfully,

Principal.

McGILL UNIVERSITY

MONTREAL

THE MACDONALD PHYSICS BUILDING

October
Sixth
1925

Sir Arthur Currie,
Principal McGill University,
Montreal.

Dear Sir Arthur,

I send an appreciation by Dr. Frost, Director of the Yerkes Observatory, of Miss Douglas, who, as you know, is on the Staff of the Macdonald Physics Building. Miss Douglas worked during the entire summer at the Yerkes Observatory and had a most enjoyable and useful experience there. I feel sure that you would like to place this letter on your files.

I cannot help cherishing a hope that ~~you~~ we may be able in our next Calendar to announce courses in Astronomy and Astrophysics by Professor Gillson and by Miss Douglas. For why should we hide such bright lights beneath a bushel ?

Yours very sincerely,

A S Eve

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

January
Twenty-seventh
1 9 2 5

Sir Arthur Currie,
Principal of McGill University,
Montreal.

Dear Sir Arthur,

After consultation with Sir Ernest Rutherford, Dr. R. W. Wood and Professor J. C. McLennan, we have decided on purchasing apparatus mainly from Hilger, London, amounting to about $10,000, and we are satisfied that this money would be wisely spent. Hilger's have made a special concession of 5 percent discount on the first $5000 and 10 percent on the second $5000. This is to be regarded as confidential by their own request, but the terms are liberal and somewhat unexpected.

I write to request that the balance of the sum be placed permanently on your annual estimates so that it can be spent from time to time on optical apparatus as it may be required for research work. Also that it may receive such interest as the University may regard as equitable, possibly 5 percent.

In this way we shall be able to recapture our previous position, and with care and industry we may even, as Rutherford suggests, find that the fire was a blessing in disguise, if we get modern apparatus to replace the old.

This letter is being forwarded both to the Principal and to the Secretary.

Yours very sincerely,

A S Eve

Director Department of Physics.

McGill University

MACDONALD PHYSICS BUILDING.

MEMORANDUM

June 18th, 1925.

TO Sir Arthur Currie. FROM A. S. Eve.

Dear Sir Arthur,

I am going off for a holiday for four or five weeks and my address either for letters or for telegrams will be Magpie, Que.

During my absence first Professor Reilley and later Dr. Foster have kindly consented to act as Director of Physics.

A telegram would reach me in about a day but there is but one post a week.

Yours sincerely,

A S Eve

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

May
Seventh
1925

Sir Arthur Currie,
Principal McGill University,
Montreal.

Dear Sir Arthur,

You will be interested to see the following high testimonial received from the very eminent physicist Stark on the work of our recently appointed Dr. J. S. Foster.

> "Much respected Colleague - Many thanks for your letter of March 20th, and your reprints. Your new results appear to me as the best and most beautiful on the subject of the Stark-effect. I must therefore publish in my article, (in Handbook arranged by W. Wien) which probably will appear as a separate book, not my own spectograms, but yours!"...
> Signed - "STARK"

We are very fortunate to have secured the assistance of a man who is at the same time eminent in research, a good teacher, and a pleasant colleague.

Yours very sincerely,

A S Eve

Director Department of Physics.

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

April
Fifteenth
1925

Sir Arthur Currie,
Principal McGill University,
Montreal.

Dear Sir Arthur,

You will remember that some correspondence passed between Dr. Meldrum Stewart and McGill University. We ought to decide shortly whether to include some lectures on Astronomy next session or not. If it is not thought advisable to start a Department of Astronomy, nevertheless some additional lectures might be begun by Professor Gillson and by Miss Douglas, in which case a statement to that effect should appear in the calendar.

The real difficulty is that this would involve some relief from the Department of Mathematics in order to free Professor Gillson for this work, so that, as I pointed out in a previous letter, additional expense would be involved.

Would you please let me know your wishes in this matter ?

Yours very sincerely,

A. S. Eve

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

February
Twenty-third
1925

Sir Arthur Currie,
Principal McGill University,
Montreal.

Dear Sir Arthur,

I was at Ottawa on Saturday at an Air Research Committee Meeting. I invited Dr. Stewart of the Observatory to lunch with me in order to talk over possibilities. The offer of the liaison between McGill University and the Ottawa Observatory is a genuine one which might prove of advantage to both parties in the future.

Would it not be wise to form a small Committee at McGill to consider this matter at an early date? I hope that you will not think me going too far if I suggested possible names for the Committee, yourself, a representative~~s~~ of the Governors, Dr. King, Professor Gillson, Dr. Murray, Professor Kelly, and myself.

I will not trouble you with any of the details which may be placed before the Committee.

Yours very sincerely,

A S Eve

Director Department of Physics

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

March
Thirteenth,
1 9 2 4.

To -
Sir Arthur Currie, G.C.M.G., K.C.B.,
Principal,
McGill University.

Dear Sir Arthur,-

In consideration of the long and valuable service which Mr. H. T. Pye has rendered as the maker of apparatus in the Physics Building, I wish to place on record my opinion that in due course he should be considered as worthy to receive a pension from the University in the event of sickness or old age making it impossible for him to continue his work and duties. I trust that such an event may be far distant.

This raises a larger question - whether the Governors of the University should not consider a contributory scheme for old age pensions, sickness insurance and accident insurance for members who join the University, who are not entitled to contribute to the Carnegie Pension Fund.

Yours very sincerely,

A S Eve

Director of Physics.

Copy sent to the Secretary.

167

May 6th, 1922.

Dr. A. S. Eve,
Physics Building.

Dear Dr. Eve:-

Reference your letter of May 3rd.

The notice in the Gazette was an incorrect report of the personnel constituting the Physics Building Committee. Dr. Harkness is still a member of that Committee.

Yours faithfully,

Principal.

167 13. 1. 22.

Dear Sir Arthur,

I enclose a statement of expenses for Drs Gray & Shaw at Toronto, which I hope may be met.

I have had three attacks of influenza in five weeks, and am now much better.

My doctor orders me North for a week & I am going tomorrow.

Dr J. A. Gray is kindly

acting as Director of Physics.

Yours very sincerely

A S Eve

January
Sixteenth
1923.

Dr. A. S. Eve,
Physics Building.

Dear Dr. Eve:-

I beg to acknowledge receipt of your letter of January 15th re the appointment of Mr. E.S. Bieler.

I am forwarding your letter to the Finance Committee with my recommendation.

Yours faithfully,

Principal.

COPY FOR SIR ARTHUR CURRIE.

Feb.
1st,
1923.

F. L. Wanklyn, Esq.,
255 Windsor Street Station,
Canadian Pacific Railway Co.,
MONTREAL.

Dear Sir,-

The Principal has forwarded me your letter of the Twenty-ninth of January raising an interesting question as to the sound audible from a track torpedo in very cold weather.

I attach some notes in reply, and we should be glad to talk over the matter with you, if you could arrange to come to the Physics Building.

Yours very sincerely,

ASE

Director of Physics.

COPY

ON THE AUDIBILITY OF TRACK TORPEDOES OR FOG SIGNALS AT LOW TEMPERATURES.

The velocity of sound in air at 0° C (32° F) is 1080 feet per second. At -40° C (-40° F) the velocity is slower, namely 1000 feet per second. At 40° C (104° F) the velocity is about 1160 feet per second.

There is no known reason why the explosion of a track torpedo should have a less output of energy in the sound (near the source) in cold weather as compared with warm, but it may be noted that experiments on this point appear not to have been carried out.

The effects of wind or of hills on the propagation of sound are well known, and are not considered in this statement.

According to theory, in still weather when there is a warm layer near the ground and a colder layer above it, the waves of sound are bent downwards towards the earth, and audibility in level country is good. Conversely, when there is a cold layer near the ground and a warmer layer above it, the waves of sound are bent upwards away from the earth, and audibility on level ground is bad.

Frequently there are horizontal layers of warm and cold air alternating so that the waves of sound are bent and refracted and also reflected, so that a complicated path results for the sound waves. The sound may leave the ground and return to it at a considerable distance. A precise analogy is the mirage seen over still water and over a desert, when distant objects may be seen apparently lifted in the air inverted or otherwise.

Not infrequently, there are vertical walls between cold and warm air or between fog and clear air. These vertical walls act as reflectors, so that sound does not penetrate them ~~but~~ or is attenuated in doing so.

A note on the effect of fog is attached from an important paper by my colleague, Dr. L. V. King, "On the Propagation of Sound in the Free Atmosphere and the Acoustic Efficiency of Fog-signal Machinery", an account of experiments carried out at Father Point, Quebec, September 1913, (Philosophical Transactions of the Royal Society of London, Series A, Vol. 218, pps. 211 - 293.

I am writing to Professor Dayton Miller to obtain from him the results on the sound heard from heavy guns in the United States, in order to find out whether he has measured the difference in the distances traversed in summer and in winter.

Finally, I venture to recommend that the transportation companies of Canada would be well advised to spend a moderate sum of money in carefully planned experiments in order to ascertain the distances at which fog signals can be heard both in the summer and in the winter. The Canadian Northern Railway beyond Model City might be a suitable and convenient point. We should be glad to co-operate in such an undertaking, if it is thought desirable.

AG

Sir,

In view of the success that has met the efforts of other Universities in the field of Radio Broadcasting, the Executive of the Radio Association of McGill University propose a similar activity on the part of students & Professors connected with this Institution. They feel that, as in other similar cases, the closer connection so established between the citizen & his local University can only have beneficial results for both.

The Glee Club, Mandolin Club, Students Orchestra, Students Dance Orchestra, etc., would, as has been shown at the Allen Theatre recently, be very acceptable.

Academically, there would arise a great appreciation of Popular & semi-popular lectures. Such addresses, of a scientific nature or otherwise, would reach thousands in Montreal alone. A crystal set obtainable by almost anyone may be depended on for local reception.

Mr. Cartier of La Presse Radio Station has offered to coöperate with the Radio Assocn. in arranging "McGill Radio nights". This station, by the installation of new French apparatus, has been made one of the most powerful in Canada, and has broadcasted as far as Alaska and Florida.

Accordingly the Executive respectfully submit a tentative programme, which although incomplete due to the lateness of the session, has been drawn up for Saturday, March 24th.

Recommended
A S Eve

J. A. Taylor
President.

McGill University.

Urgent

MACDONALD PHYSICS BUILDING.

MEMORANDUM 20. 3. 23

TO the Principal. FROM A. S. Eve

The programme for March 24th
seems a sound one.
The larger question might stand over
until after this trial.
Has the above your approval please?

A S Eve

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

18 April 1923

Dear Sir Arthur,

I am going to Washington tonight, address Racquet Club, to the meeting of the American Physical Society, where I present a paper.

On Monday & Tuesday Colonel Stedman, Air Technical Officer, and I go to Langley Field, Bureau of Standards, &c, on behalf of the Air Research Committee.

Dr Gray will kindly act as Director of Physics during my absence

Yours very sincerely

A S Eve

Dr King is lecturing at the Franklin Institute, Philadelphia, & will come on to Washington to read another. ASE

July 13th, 1923.

Dr. A. S. Eve,
C/o. The Bank of Montreal,
9 Waterloo Place,
London, England.

Dear Dr. Eve:-

It was agreed at the Conference of Canadian Universities that a Committee of Six be appointed to confer with the Dominion and Provincial Governments and with the Royal Society in regard to the publication of the results of Scholarships and Research.

I would like very much if you could find it possible to serve on this Committee as the representative of McGill.

With all good wishes for a pleasant vacation, I am,

Yours faithfully,

July 13th, 1923.

Dean G. H. Ling,
University of Saskatchewan,
Saskatoon, Sask.

Dear Dean Ling:-

With reference to your letter of June 30th, I have asked Dr. Eve, Director of our Physics Department, if he will serve as the representative of McGill University on the Committee appointed to confer with the Dominion and Provincial Governments and with the Royal Society in regard to the publication of the results of Scholarships and Research.

Yours faithfully,

McGILL UNIVERSITY
FACULTY OF APPLIED SCIENCE

Dean's Office:
FRANK D. ADAMS., PH.D., D.SC., F.R.S.—DEAN.

MONTREAL July 9th.1923.

General Sir Arthur Currie, G.C.M.G., K.C.B., LL.D.,
Principal,
McGill University,
Montreal, P.Q.

Dear General Currie,

I received the letter under date June 30th. which was sent to you by Dean Ling of the University of Saskatchewan, and which you forwarded to me for advice as to what should be done in connection with Dean Ling's request.

In the letter Dean Ling states that a Committee of six was to be appointed to confer with the Dominion and Provincial Governments and with the Royal Society in regard to the publication of the results of "Scholarships and Research", and asking that you would furnish him with the name of some person selected by you to act on the Committee.

In reply to your request, I should recommend that either Dr. Ruttan or Dr. Eve be appointed on this Committee, as they are more directly interested in publications of this character than almost any other member of the staff.

I remain,

Yours very sincerely,

Frank D. Adams

F Ruthven
File

University of Saskatchewan

Saskatoon, Saskatchewan

June 30, 1923.

Principal, Sir A. W. Currie,
McGill University,
Montreal.

Dear Principal Currie,

After President Tory submitted to the Conference of Canadian Universities the resolution passed by the Royal Society of Canada, it was agreed that a Committee of six be appointed to confer with the Dominion and Provincial Governments and with the Royal Society, in regard to the publication of the results of Scholarships and Research. It was agreed that one of these six members should be named by you on behalf of McGill University.

Will you kindly furnish me with the name of the person selected by you.

Yours truly,

G H Ling

Secretary-Treasurer.

Dear Dean Adams

What is your advice?

AW Currie

5/7/23

167

McGILL UNIVERSITY

MONTREAL

THE MACDONALD PHYSICS BUILDING

December 29th, 1921.

Sir Arthur Currie, K.C.M.G.,
Principal,
McGill University.

Dear Sir Arthur;-

A second attack of Influenza has prevented me from going to Toronto to represent McGill University. I am now well again, but my Medical Advisor ordered me not to go.

Dr. King has returned and is in good health and spirits. I recommended him to keep quiet and not to go to Toronto. Doctors Gray and Shaw of my Department are attending all the meetings at Toronto, and reading papers there. I am very sorry not to have been present there myself.

Yours very sincerely,

A S Eve

167

December
Thirty-first
1921.

Dr. A.S. Eve,
Physics Building.

Dear Dr. Eve:-

I am sorry to learn that you have been laid up with the influenza, but glad to know that you are able to be around again.

With reference to the visit of Professor Whitehead of Cambridge, I shall be very glad if you will proceed at once to make any arrangements you can for a visit from him to McGill.

Yours faithfully,

Principal.

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

December 28th, 1921.

The Principal,
McGill University.

Dear Sir Arthur;-

Professor Basil Williams informs me that Professor Whitehead of Cambridge University will be in the United States next April. Professor Whitehead is one of the greatest living authorities on Relativity and allied subjects. Prof. Basil Williams tells me that he is an excellent Lecturer. I suggest that it might be a good plan to invite Whitehead to give four or five lectures at McGill University, one of them before a large general audience of Professors, Students and others in the Royal Victoria College, and the others of a more technical nature to those who wish to attend in the Physics Building.

I should be glad to make the arrangements through Basil Williams if the proposal meets with your approval. I imagine that he would want his expenses and possible $100.

more. In fact I recommend an appropriation not exceeding $250.00 for this purpose. A somewhat analogous case is that of Professor Cohen who gave an admirable course of lectures in the Chemistry Department.

Yours sincerely,

A S Poe

COPY FOR SIR ARTHUR CURRIE.

Dec.
23rd,
1922.

Sir Joseph Thomson, O.M.
Trinity College,
Cambridge, England.

Dear Sir Joseph,-

A few days ago I received a letter from Dr. R. B. Owens of the Franklin Institute, Philadelphia. He wrote in high spirits over the prospect of your visit and lectures on the Electron in Chemistry.

As soon as I heard that you were coming across the Atlantic, I hurried to see our Principal, Sir Arthur Currie, I also interviewed the chemists, particularly the Director, Dr. Ruttan. We are all very anxious that you should if possible reserve such time as you are able to pay a visit to McGill and to give an address, at least one, to the physicists and chemists, doctors and those interested in recent advancements, particularly on your own fertile lines. You may be sure of a royal welcome, and I gathered from Sir Arthur that there would be no difficulty as to the expenses involved. We have a newly founded scientific society called the Sigma Xi to encourage research; an American scheme overflowed to Canada, of which our McGill branch is the first offspring. This Society also, of which I am vice-president, involves itself gladly in this invitation.

In order to save correspondence, I am sending a copy of this letter to Sir Arthur Currie and to Dr. R. B. Owens.

Yours very sincerely,

A S Eve

Director of Physics.

167

October
Fourth
1922.

Dr. A. S. Eve,
Physics Building.

Dear Dr. Eve:-

I bèg to acknowledge receipt of your letter of September 14th re B.A.,M.D. course.

I have written to the respective Deans asking that the letter be considered at the next meeting of the Faculties.

Yours faithfully,

Principal.

February 21st,1925.

Dr. A. S. Eve,
Physics Building,
McGill University.

Dear Dr. Eve:-

I have your letter of the 18th of February with reference to the setting up of courses in Astronomy.

I shall give this matter consideration and consult with you and others of my colleagues concerning it.

Yours faithfully,

Principal.

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

February
Eighteenth
1925

Sir Arthur Currie,
Principal,
McGill University.

Dear Sir Arthur,

Yesterday I saw a letter written by Dr. Meldrum Stewart to you concerning a possible liaison between McGill University and the Ottawa Observatory. This offer is of course a magnificent one and opens up possibilities which we could not possibly achieve under an expenditure of something like $100,000 a year, which would be required if we had an Observatory of our own. Indeed it makes possible the establishment of a Department of Astronomy at a moderate cost, for we have at McGill in Professor Gillson a man who may justly be termed an eminent astronomer, more particularly in that branch of dynamical astronomy which is weak on this continent.

A possible scheme would be to introduce, for Honour Students only, a three hours' course in the Third Year and two courses of three hours in the Fourth Year. Students would receive their practical instruction during the summer at Ottawa.

If this were done the only additional expense would be the appointment of another lecturer in Mathematics so as to free Professor Gillson for half his time to teach Astronomy. It is possible he might require some assistance from Miss Douglas, who would then deserve a renumeration. Thus the total expenditure may be estimated at the cost of a lecturer, about $2,500 or $3,000 a year. The result achieved for so moderate a sum would be large and is well worthy of consideration.

Yours very sincerely,

A S Eve

Director Department of Physics

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

December
Eighteenth
1924

The Principal,
McGill University,
Montreal.

Dear Sir,

In spite of Physics now being a voluntary subject for the greater part of the Arts students, we are, owing to recent changes, approaching a state of congestion resembling that of 1921-22, the most crowded year of all. The figures are as follows;

	1921-22	1922-23	1924-25
Medical	114	83	83
Dental	43	30	12
Arts	150	143	259
Commerce	67	42	32
Applied Sc.1	203	113	112
Applied Sc.2	143	117	95
Total	720	528	593

These figures refer only to students taking their lectures in the large lecture-theatre and workers' in the Elementary Laboratory where the pressure is now being again felt. The handling of the very large Arts class in the laboratory is really our principal difficulty to-day.

Yours very sincerely,

A S Eve

Director Department of Physics.

Copies sent to
Dean of the Faculty of Arts
Dean of the Faculty of Applied Science.

December 16th, 1924.

Dr. A. S. Eve,
Department of Physics,
McGill University.

Dear Dr. Eve:-

Thank you for your letter of the 15th with the intimation as to how the loss has been adjusted.

I am quite sure your Committee has protected the interests of the University amply but fairly.

Yours faithfully,

Principal.

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

December
Fifteenth
1 9 2 4

Sir Arthur Currie,
Principal McGill University,
Montreal.

Dear Sir Arthur,

Dr. Shaw, Dr. Keys and I met the Adjusters this afternoon and found that one of them had been to Rochester and interviewed Messrs. Bausch & Lomb, who upheld our general point of view that the optical apparatus injured by fire was practically valueless, but that nevertheless what might be termed the junk should be worth $1,500. This appeared to us to be an over-estimate.

On the other hand there were two or three items, notably Nos. 17, 19, 21, which could with justice be reduced slightly.

After conversation I admitted $1,000, and they wanted $1,500 and we settled at $1,250. The figures therefore arrived at are these:

Our original claim -	$19,944.
Deduct	1,250.
Figure agreed upon	$18,694.

We are all satisfied that this figure very closely represents what is absolutely and fairly due to the University on the part of the Insurance Company and we are entirely satisfied with the justice of this settlement.

I wish to add that throughout the discussion the Adjusters met us in a very fair and pleasant manner.

We retain all damaged goods.

Yours very sincerely,

A S Eve

A Norman Shaw.

David A. Keys.

MACDONALD PHYSICS BUILDING.

MEMORANDUM. November 7th, 1924.

ON THE RELATIVE EXPENDITURE OF THE TOTAL APPROPRIATIONS TOWARDS RESEARCH AND TOWARDS INSTRUCTION.

The expenditure on research is not less than 10 percent nor more than 20 percent of the total appropriations to the Department of Physics. On the average it is estimated that 15 percent of the expenditure goes towards research work.

It must be noted that the teaching of a large number of students occupies the main efforts of the Physics Staff, and that, for the most part, it is the surplus energy of the instructors which is directed towards research. Hence the amount of research done fluctuates with the health and strength of the Staff. Thus, in the session 1923-24, owing to sickness and other causes , I should estimate that 10 to 12 percent only was directed towards research. In the current session the situation has greatly improved and perhaps 18 to 20 percent would be a fair estimate.

These figures have been arrived at by independent suggestions and subsequent discussions with all the senior members of my Staff.

A S Eve

Director Department of Physics.

McGILL UNIVERSITY
MONTREAL

THE MACDONALD PHYSICS BUILDING

October
Fourteenth
1924

Sir Arthur Currie,
Principal of McGill University,
Montreal.

Dear Sir Arthur,

Owing to my broken leg I have not had any opportunity of talking with you about current affairs. As regards the Physics Building all goes well. With regard to the University I note that the Arts Building is now so over-crowded that students can scarcely pass from lecture to lecture.

I should like some time to suggest, or recommend, a scheme by which the present Faculty of Arts is divided into three new faculties, (1) the Faculty of Arts, including Languages, History, Philosophy, etc., (2) the Faculty of Science, including all the pure sciences, and (3) the Faculty of Commerce. You are well aware that the present Faculty of Applied Science is a School of Engineering in the main.

Yours very sincerely,

A S Eve

164

C/o Bank of Montreal
9 Waterloo Place
London

13. 8. 23

Dear Sir Arthur,

Your letter has followed me. It will be a great pleasure to serve on the Committee regarding publication.

My visit to Rutherford at Cambridge was delightful and I saw the excellent work done there, and got a promising young demonstrator.

Tomorrow I visit the National Physical Laboratory at Teddington.

I shall be at the British Association at Liverpool Aug 12–18, ~~send~~ and sail s "Montlaurier" Sept 20th. from Liverpool.

I trust that you can get some leisure this summer.

Yours very sincerely

A Shea

COPY

Phil. Trans. Roy. Soc. Vol. 218 By Dr. L.V.King.

NOTE ON THE EFFECT OF FOG.

According to the verdict of the 1873 South Foreland tests, it would appear that the passage of sound through the atmosphere is not impeded by fog, or by falling snow, hail, or rain. No fog occurred during the Trinity House experiments conducted at St. Catherine's Point in 1901. It is easily understood that the passage of sound may be favoured by the comparatively calm and homogeneons condition of the atmosphere usually met with in foggy weather. When the fog lies over the sea in the form of low-lying distinctly separated banks, as is often the case in the Gulf of St. Lawrence, conditions are very different. In these circumstances it has been pointed out by CATFORD* as a result of five years' observations that "when both fog-signal and observer are immersed in the same bank of fog, little interference may be expected; if the fog-signal is in fog, and the observer in clear atmosphere, or vice versa, great interference may be expected, still more so if the signal is in one fog-bank with the observer in another bank; a bank of fog will often reflect sound very strongly and definitely."

N B.

The influence of fog particles on the passage of sound has been studied theoretically by SEWELL**, who found that a fog containing 10^6 particles per cubic centimetre having diameters as small as 0.002 mm. would not interfere appreciably with the propagation of waves of small amplitude over the ordinary range of frequencies.

Although preparations were made to navigate during a fog, no opportunity occurred of carrying out an acoustic survey under these conditions during the entire series of Father Point tests. It has been repeatedly asserted to the writer by lighthouse-keepers and others that the sound of the diaphone as heard at a moderate distance (within 100 feet) seems to be very appreciably stifled. On the only occasion that fog occurred this conclusion was confirmed by the writer as judged by ear. Before the phonometer could be set up to test the point objectively, the fog lifted, and no occasion of carrying out further investigations presented itself subsequently. It is not impossible, in the case of very intense waves in the immediate vicinity of the diaphone trumpet, that a heavy fog may give rise to a marked extinction through its effect on the viscosity, thermal conductivity, and specific heat of the atmosphere. From what has already been said on the subject of the propagation of waves of finite amplitude, it is easily seen how a change in the physical properties of air occasioned by the presence of fog*** may be the cause of increased energy losses associated with the propagation of waves of large amplitude. The existence of such losses may not be inconsistent with better audibility at a great distance, resulting from propagation under conditions of improved atmospheric homogenity generally prevailing in foggy weather.

Footnotes.-

* CATFORD, E.O. (Engineer-in-charge of the Platte Fougère Fog-signal Station, Guernsey), "Fog Signals", 'Engineer', 119, Feb.5, 1915, pp. 129-130.

** SEWELL, C.J.T., "The Extinction of Sound in a Viscous Atmosphere," &c., 'Phil. Trans.,' 210, A, 1910, pp. 239-270.

*** A study of the physical characteristics of fog has been recently commenced by Wells, P.V., and Thomas, A.L., 'Bulletin No. 5 of the International Ice Observation and Ice Patrol Service,' U.S. Treasury Department, Washington, 1916.

MACDONALD PHYSICS BUILDING.

Name	Rank	Lectures Hours per week	Lab. Periods.	Colloquium etc.	Research Work
Eve, A. S.	Prof.	7		3	R
Barnes, H.T.	Prof.	none			R
King, L.V.	Prof.	3		3	R
Shaw, A.N.	Assoc.Prof.	8		4	R
Reilley, H.E.	Assist. Prof.	10		3	R
Keys, D.A.	" "	2	(13 (general supervision)	) 3	R
Bieler, E.S.	" "	5	2	3	R
Foster, J.S.	" "	4	2	3	R.
	Demonstrator				
Crowe, M.	Full		6+books	3	R
Home, M.S	Full		(7 + books +papers)	3	R
Priestman, B.	Full		(7 + books + papers)	3	R
Douglas V.A.	Half	(4) (Ph. Ed.) (Pharmacy)	4	3	R
Cam, N.	Half		4 + books	2	0
Adney, F.G.	Half		5 + books	3	R
Gliddon C. G.	Part		(4 + books + papers)		0
Turner, A.L.	Part		(6 + books + papers)	2	0

(1) Details of Research Work attached.
(2) Colloquia. - All attend and take some share in.
  (a) Journal Club Monday 5-6
  (b) Colloquium Thursday 5-6
  (c) Physical Society and usually Chemical Society Friday 5-6.

A S Eve
8.11.24

MACDONDLAD PHYSICS BUILDING RESEARCH WORK PROGRESS

Dr. H. T. Barnes -

1. St. Lawrence River ice investigation.
2. Part One - Heat Exchange of the river in relation to various ice formation.
3. Part Two - Ice breaking and ice navigation on the river investigating the means of extending the period of navigation.
4. Physical constants of Ice.
5. Specific Heats and simple liquids and their relation to each other.
6. Study of Snow Crystals in polarized light with reproduction in natural colors.
7. Iceberg investigation physical properties method of detection and means for destroying.

Dr. L. V. King -

1. Use of X-ray diffraction apparatus for study of crystalline structure of solidified gases and liquids at low temperatures.
2. Design, construction and testing of large expansion chamber for study of α-ray trajectories in various gases and vapours.
3. Completion of final report on improvements of lighthouse designs -- summing up results of fog alarm researches dating from 1913.
4. Investigations in theoretical physics on the structure of molecules in relation to optical phenomena (Scattering of light, optical activity, etc.,)

Dr. A. N. Shaw -

1. Writing up further report on "Estuary Tidal Analysis"
2. Supervising F. G. Adney in work on "Thermo Electric Effects."
3. Supervising Miss Crowe in work on "Conductivity of Concentrated Solutions."
4. Developing an Absorption Hygrometer with assistance of J. A. Taylor.
5. Continuing work on Standard Cells (advisory to Prof. Reilley)

Projected - To test a new type of X-ray bolometer.

Dr. D. A. Keys -

1. Conduction of electricity in gases.
2. Applications of Pieze electricity with cathode ray oscillograph.

Prof. H. E. Reilley -

1. Conductivity of animal membranes. Strength of tendrons, arteries etc., and other problems related to the preceding.
2. E. M. F. of Standard Cells.
   Temperature of Standard Cells.
3. Courses in Optics, Quantum Theory, and laboratory work in optics.

Dr. E. S. Bieler -

1. Investigation of the law of force in the neighbourhood of the nucleus of heavy atoms by a study of the scattering of swift α-particles through large angles.

Dr. J. S. Foster -

Apparatus is being assembled for a continuation of an investigation of the effect of electric fields on spectral lines. A large six-prism spectrograph is under construction. Arrangements have been made for an electrical outfit to supply direct current at ten thousand volts. It is hoped that the complete apparatus for this research will be ready for use not later than January 1st, 1925. It is believed that it will be possible to extend somewhat our knowledge of the Stark Effect and to give the results an orderly and useful interpretation.

Miss A. V. Douglas -

It is hoped that an investigation may be carried out in the search for a method of utilizing objective prism spectra for determining stellar radial velocities either by finding a suitable light filter or by some other method.

Miss M. Crowe -

Electrical conductivity of Aqueous solutions of highly deliquescent salts.

Mr. M. Home -

An investigation of the dielective constant of certain substances at low temperatures.

Mr. F. G. Adney -

Investigation of thermo-electric effects in homogeneous conductors.

Mr. B. Priestman -

Analysis of absorption (and or) fluorescent emission spectra of gases and (if possible) of their metallic films, excited by Mercury "white" arcs, with a view to determining the "natural" atomic frequencies in metal crystals, and the energy distribution amongst the latter.

A S Eve