

UNIVERSITY OF CALIFORNIA
DEPARTMENT OF PHYSICS
BERKELEY

479

December 5, 1931

Dr. Y. Nishina
Institute of Physical and Chemical Research
Komagome, Hongo
Tokyo, Japan

Dear Dr. Nishina:

I am enclosing herewith a copy of the abstract of a paper given before the National Academy on the production of high speed protons. Unfortunately we have not had time to write up a detailed account of our experiments, but we expect to do so some time during the next month. When this prospective manuscript is published, I shall remember to send you a reprint.

Sincerely yours,

Ernest O. Lawrence
Ernest O. Lawrence
Professor of Physics

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Professor Ernest O. Lawrence
 Department of Physics
 University of California
 Berkeley, Calif.
 Dear Professor Lawrence,

20.4.1932

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 DIVISION OF PHYSICS
 U.S. N. S. A.
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I must thank you very much, ^{indeed} for your kind letter of the 5. Dec. last and a ^{separate} copy of your note in "Science" on the production of high speed protons. As I have been ill for some time, I have been prevented from answering to your letter. I am very much interested in your work and should be very much obliged to you if you would send me a reprint, ~~if~~ when you publish the detailed account of your experiments, for which ^{I am} ~~we are~~ waiting with a keen interest.

July 15, 1946

Dr. E. O. Lawrence
Radiation Laboratory
University of California
Berkeley, Calif. U. S. A.

Dear Dr. Lawrence:

It is a long time since I last wrote to you. During that period a good deal has happened between us. A few days ago it happened to me to read your old kind letters and I realized what a great change we have experienced. The 60" cyclotron which you were so kind to help us construct is unfortunately gone now forever deep in the Pacific. It may be said that it was constructed for being destroyed, because we could not use it for research very much on account of the war.

As Dr. Kelly, of whose home journey I am availing myself for writing this letter, may tell you, our Institute will be changed into a new company, which we are going soon to organize and start afresh. I might work as an organizer for our new company and then have to drop physics for some years.

After all everything which we experience is to build a peace loving, civilized nation so that you may have a better neighbour than ever before and the ocean between us may be literally "Pacific". In this respect I should much appreciate the future cooperation and assistance from the side of your scientists.

With kindest regards,

Yours Sincerely

Dr. Yoshio Nishina

YN:SY

July 15. 46

P.S.

P.S. We are very much interested in Dr. McMillan's Synchrotron which I understand is soon to be built. How is the progress of the construction of the 5,000-ton cyclotron? I wish you a great success.

E. O. Lawrence
UNIVERSITY OF CALIFORNIA
RADIATION LABORATORY
BERKELEY 4, CALIFORNIA

Dr. Yoshio Nishina
The Institute of Physical and
Chemical Research
Komagome, Hongo
Tokyo, JAPAN

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UNIVERSITY OF CALIFORNIA

RADIATION LABORATORY
BERKELEY 4, CALIFORNIA

October 31, 1946

Dear Professor Nishina:

I have written Sagane and I must apologize for this long delay in acknowledging your letter which Dr. Kelly brought me.

Dr. Kelly told me something of your plans to reorganize your institute and I certainly wish you every success. Knowing of your present difficulties in getting periodicals, I have arranged to have PHYSICAL REVIEW, THE REVIEWS OF MODERN PHYSICS and THE REVIEW OF SCIENTIFIC INSTRUMENTS sent to you for a year or longer,--let us say until more normal arrangements of international exchange are achieved.

Dr. Kelly told me of the scarcity of things in Japan at the present time and understanding that now one can mail parcels to Japan, I am sending you under separate cover (as a test case, so to speak) a carton of cigarettes, which I hope will reach you in good order. I don't know whether you smoke but if not you surely will have friends and colleagues that will be glad to have the cigarettes.

Work here is proceeding quite well. The most interesting impending event is the turning on of the 184 inch cyclotron. The construction is practically completed and any day we should be looking for a beam of 180 million volt deuterons.

Dr. Kelly told me something of your activities and I want to congratulate you and your colleagues on the way you are going ahead with recovery measures. Needless to say, all of us here send you warmest greetings and heartiest good wishes for the future.

With kindest personal regards,

Very cordially,


Ernest O. Lawrence

Dr. Yoshio Nishina
The Institute of Physical
and Chemical Research
Komagome, Hongo, Tokyo

Professor E. O. Lawrence
University of California
Radiation Laboratory
Berkeley 4, California,
U. S. A.

Dear Professor Lawrence:

I appreciate immensely your kind letter of October 31, which Dr. Kelly handed over to me. It was a great pleasure for me to have your letter again, which is always stimulating for me.

It was very kind of you to have arranged to get Physical Review, The Reviews of Modern Physics and the Review of Scientific Instruments set to me until "more normal arrangements of international exchange are achieved." I hope soon to be able to look in these periodicals. You probably do not know how we long for international scientific informations, from which we have been cut away for years.

I also appreciate your kind sending of a carton of cigarettes, which, however, have not come to my hand and which I presume have already gone astray. Since Eugene told me he received chocolates you sent to him, people seem to be more interested in cigarettes than in chocolates, although it is contrary for me. Anyhow your thought to send such things to me is a great encouragement for me amid the devastation around us. I cannot find adequate words of thanks to you for your kind thought. The other day Dr. Kelly told me that you sent again some things to me. I am really grateful for your kind thought indeed.

Here everything is still in the state of instability. Last November I was elected to the Presidency of our Institute, more than half of which was destroyed by air-raids. I became a sort of businessman for the time being, because there are tremendous work to be done for rehabilitation of our Institute, which is to become a new company instead of a juridical person as it has been for about 30 years. The first work I have to do is the repair of some buildings in order that we can start enough work for sustaining ourselves economically. For this I must get a loan from a bank and this is outside the domain of science. My objective is to reorganize our Institute in such a way that we can conduct a wide range of work, from fundamental scientific research to its application to industry, agriculture and medicine. This is not a small work, especially in such a difficult time as we experience now.

I think, however, this is the only way we can survive and at the same time can contribute to the rehabilitation of Japan, to the progress of science and thus to the benefit of the world. Now I am laying just the foundation of this work, which will take many years to come, and I have to put aside physics for the present.

Dr. Kelly told me of your very kind thought to let me come to your laboratory. I would certainly be very much pleased to see you personally and to be acquainted with your colleagues. Dr. Kelly, however, is in the opinion that it is not allowed for Japanese scientists to come to America for some time to come. As regards myself I have much to do at present as above mentioned and I probably can not leave Tokyo say within half a year. The above restriction, however, will be removed in the meantime and then I should like to come to America and see how the nuclear physics is progressing at an amazing pace. I should like also to see many of American physicists with whom I want to talk about the future outlook of the international politics viewed from the scientific angle. In my opinion scientist's way of thinking must prevail throughout the world, if the progress of international politics towards enduring peace is to be achieved. I am very pleased to hear from Drs. Henshaw and Brues, who are on a short visit to Japan, that many American scientists are of the same opinion.

I saw in the Newweek Magazine that your 184 inch cyclotron was put into operation and a beam of 200 million volt deuteron was obtained. I congratulate you on the feat, which will open up a new vista in nuclear physics. I am very much looking forward to the results of studies with such a powerful means. I send you warmest greetings and best wishes for the New Year.

With kindest personal regards

Yours Very Sincerely,

Dr. Y. Nishina

YN:SY

May 29, 47

Professor E. O. Lawrence
Radiation Laboratory
University of California
Berkeley 4
California, U. S. A.

Dear Dr. Lawrence:

At last I have come to write this letter, of which I have been thinking with a bad conscience for nearly half a year. First of all I must thank you for your kind thought in sending me number of parcels containing beautiful candies and delicious dried fruits. I cannot be too thankful to you.

The parcel containing nourishing Vito Bert chocolate bars in golden wrappers, which you had sent out on November 29, 1946 arrived here on January 10, 1947, just a week after I had written to you my last letter of January 3, 1947, in which I mentioned that the cigarettes you had sent to me seemed to have gone astray. This carton of cigarettes, however, arrived here safely 5 days later. The commutative law thus seems to hold in the order of delivery of parcel post. In fact it was the case with other parcels too, as you see in the following table:

Parcel Contents	Date of Dispatch (Berkeley)	Date of Arrival (Tokyo)
1 Box Cigarettes	Nov. 14, 1946	Jan. 15, 1947
1 Box Candy Bars	Nov. 29, 1946	Jan. 10, "
1 Box Candy Bars & 5 Packages Dried Fruits	Feb. 21, 1947	March 31, "
6 Packages Dried Fruits	Feb. 27, 1947	April 20, "
1 Box Candy Bars	March 8, 1947	April 2, "

Every time your parcel arrived here, my colleagues and assistants in our laboratory as well as my boys were simply delighted and enjoyed the taste of your precious gifts. You probably do not know how we value sweets, which are very scarce here. I have two boys, the elder being 17 years old and the younger 15. Since our house was burnt by air-raids during the war, we are living in one of the laboratory rooms of our Institute. Every time we take your sweets in the evening, I tell my boys about your work in which they have a great interest.

I must thank you also for "Physical Review", "Journal of Applied Physics" and "Review of Scientific Instruments", which you addressed to Dr. Kelly, CHQ, AFPAC, where they arrived as shown in the following table:

Journals	Number	Date of Arrival
Physical Review	Jan. 1	May 27, 1947
	Jan. 15	"
	Feb. 1	"
	Feb. 15	"
	March 1	"
	March 15	April 18, "
	April 1	May 27, "
	April 15	May 29, "
Review of Scientific Instruments	Jan.	May 27, "
	Feb.	"
	March	May 1, "
Journal of Applied Physics	Jan.	May 29, "
	Feb.	"
	March	April 18, "
	April	May 27, "

We are all very enthusiastic to read those journals and we now feel that we have been again brought back to the international scientific world. We are all very grateful for your thought.

For last six months I have been engaged in the reorganization and rehabilitation of our Institute. The work does not proceed smoothly, but oscillates about an equilibrium point, which is making a very slow forward movement under internal and external influences. In this respect Dr. Kelly has been doing a strenuous effort for the rehabilitation of science and tech-

nology in this country and I must say that we owe him the very existence of our Institute. But for him it would have been impossible for us to keep our present organization. Now that we have just been placed on a right track, we can go ahead though slowly. My work now is to make the economy of our Institute self-supporting. This is not an easy task for a scientist but I have got to do it.

I was told that we might have a chance of having you among us here in Tokyo in near future. That would be a great joy for us and I hope it will soon be realized. We are facing a great number of difficult problems to solve and your advice would help us a great deal.

How is your gigantic cyclotron working? I suppose you are obtaining very interesting results, to which I am very much looking forward. I wish you a great success.

With kindest regards,

Yours Sincerely,

Dr. Yoshio NISHINA

YN:SY

O Phys. Rev. Oct 15, 8, 1907
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O Phys. Rev. Nov 1, 9, 1907
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O Rev. Sci. Instr. " " " " " " " " " " " "

O Ann. App. Phys. Nov 7, 1907
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O Rev. Sci. Instr. Nov 15, 1907
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O Phys. Rev. Dec 1, 1907
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O Phys. Rev. Jan 1, 1908
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O Applied Phys. Jan 15, 1908
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O Rev. Sci. Instr. Feb 1, 1908
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August 16, 1948

Dr. E. O. Lawrence
Radiation Laboratory
University of California
Berkeley 4
California, U. S. A.

Dear Dr. Lawrence:

Yukawa told me that he will visit you on his way to Princeton and I avail myself of this opportunity for writing this letter to you. I am very sorry that I have not written to you for such a long time. You sent to me so many parcels which contained such nice things as we have never seen in our life. You probably do not know how much my family enjoyed those precious things, for which I wrote letters of thanks to you. I do not know whether those letters arrived to you or not.

You also sent us through Dr. Kelly "The Physical Review", "The Journal of Applied Physics" and "The Review of Scientific Instruments". These journals are the only channel through which we can get in touch with the scientific world abroad. We were completely out away from the international science since the summer of 1941 and now we are gradually getting familiar with it. We all thank you very much for those journals, which, however, have been stopped since January. We received January 15 Number of the Physical Review, January Numbers of the Journal of Applied Physics and of the Review of Scientific Instruments respectively but since then no journals have arrived here and we are all longing for them. I should be much obliged to you, if you would enquire into the matter. The postal regulation has recently been changed and printed matters can be sent directly to us instead of through Dr. Kelly.

By the direction of GHQ here our Institute was reorganized into a private concern on March 1, 1948.

The administration of the Institute is not an easy matter at this time of national hardship. The most difficult thing is the finance of the Institute, on which we have to concentrate our energy. I had to give up physics and become an administrator and a business man. The present objective of our Institute is the application of science to peaceful industry and thus to promote the rehabilitation of general economy of this country, in which the poverty paralyses the whole machinery of the people. Scientists must take their due share in realizing the economical recovery of Japan in order that she can assume her responsibility in promoting world peace.

Your achievements in nuclear physics have been reported in our daily news papers now and then. The production of mesons and the plan of the billion eV synchro-cyclotron, for example, were the sensational news among us. I wish you a good health and a great success in promoting our science.

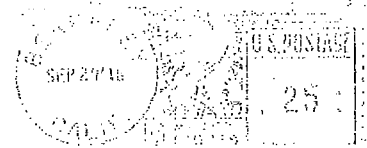
Wish kindest personal regards,

Yours Very Cordially,

Dr. Yoshio NISHINA
President,
Scientific Research Institute
Komagome Bunkyo-ku, Tokyo

YN:SY

Prof. E. O. Lawrence
UNIVERSITY OF CALIFORNIA
RADIATION LABORATORY
BERKELEY 4, CALIFORNIA



Dr. Yoshio Nishina, President
Scientific Research Institute
Komagome Bunkyo-Ku
Tokyo, JAPAN

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UNIVERSITY OF CALIFORNIA

RADIATION LABORATORY
BERKELEY 4, CALIFORNIA

September 18, 1948

Dr. Yoshio Nishina, President
Scientific Research Institute
Komagome, Bunkyo-ku,
Tokyo, Japan

Dear Dr. Nishina:

Professor and Mrs. Yukawa spent last week with us and we enjoyed so much their visit.

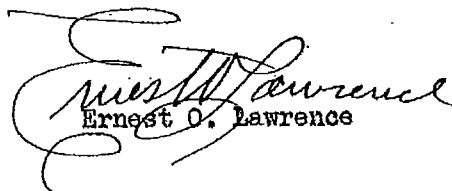
He handed me your letter which I was very glad to receive, although I am sorry to learn that for some reason unknown to us the journals have not been reaching you since last January. We are making inquiries and will make every effort to see that they continue to come to you.

Your new responsibility of developing the science and technology of Japan as an aid in the rehabilitation of the general economy of the country is certainly important and I have no doubt you are making splendid progress in this direction.

Incidentally, I did receive your letters of thanks for the little parcels which I sent from time to time last year and thought that I did write you to that effect. I am so glad that they were welcomed by your family. I understand that general conditions in Japan are much improved now and that particularly the food supply is much better.

With all good wishes,

Sincerely yours,


Ernest O. Lawrence

EOL:EI

December 16, 1948

Professor E. O. Lawrence
Radiation Laboratory
University of California
Berkeley 4
California, U.S.A.

Dear Dr. Lawrence:

I thank you very much indeed for your kind letter which you wrote to me in September. I was very pleased to hear from you.

Quite recently I received "Physical Review", "Journal of Applied Physics" and "Review of Scientific Instruments" from the beginning of this year up to October. We are so much excited to see these journals again, to which we have been looking forward for such a long time. We are all very much obliged to you indeed. I do not know how to thank you.

Since the end of November we have been enjoying the visit of five eminent scientists from the United States. Among them I am very pleased indeed to find my old friend Rabi, who brought me your kind message. We have too much to talk and his stay is too short. I hope we shall have the opportunity of having you here some day.

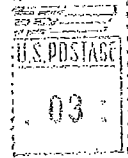
Thanking you again for sending me those journals and wishing you a merry Christmas and a happy New Year,

Yours Sincerely,

Dr. Yoshio NISHINA

YN:SY

E.O. Lawrence
UNIVERSITY OF CALIFORNIA
RADIATION LABORATORY
BERKELEY 4, CALIFORNIA



Dr. Yoshio Nishina
Scientific Research Institute, Ltd.
Komagome Bunkyo-Ku
Tokyo, JAPAN

UNIVERSITY OF CALIFORNIA

RADIATION LABORATORY
BERKELEY 4, CALIFORNIA

January 7, 1949

Dear Dr. Nishina,

I have just received by mail from Professor Rabi the beautiful pearl necklace and Mrs. Lawrence and I don't know how to thank you for this wonderful gift. The pearls are beautiful beyond words and Mrs. Lawrence will always treasure them as a wonderful token of your friendship.

I was very glad to get your letter also and to know that the back numbers of the journals have arrived and I hope that they will continue to come without interruption in the future.

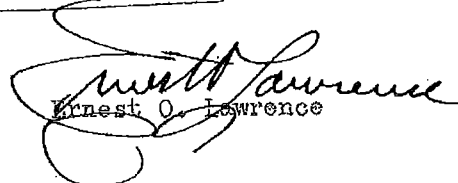
I am glad also to learn that you have enjoyed Rabi's visit. I had a short note from him indicating that he had a very enjoyable time with you and I am looking forward to seeing him soon and hearing all about it.

At the moment we are having an unusually interesting time here in the laboratory. We have just completed the modification of the 184 inch cyclotron for the production of 350 Mev protons and we are finding that these high energy protons produce considerable numbers of mesons as expected; also, by charge exchange we have a beam of 350 Mev neutrons. The 300 Mev synchrotron is now getting into operation also and accordingly, as you may well imagine, we are all very busy.

I am sure that your good wife had a prominent part in this beautiful gift to me and my wife and so will you convey to her our warmest greetings and thanks.

With all good wishes,

Very cordially,


Ernest O. Lawrence

Dr. Yoshio Nishina
Scientific Research Institute, Ltd.
Komagome, Bunkyo-ku, Tokyo, Japan

February 20, 1949

Dr. Ernest O. Lawrence,
Director, Radiation Laboratory
University of California
Berkeley 4, California
U. S. A.

Dear Dr. Lawrence:

At the invitation of the United States National Academy of Sciences, the three officers of the Science Council of Japan are going to leave here on March 3 for Washington. They are Dr. Naoto Kameyama, the President, Dr. Sakae Wagatsuma and myself, the Vice-presidents. The visit was arranged by Dr. Bronk of the National Academy of Sciences and Dr. Kelly of the General Headquarters in Tokyo, who left the office last January and is now in the States. The travel will take place under the sponsorship of the United States National Academy of Sciences for a period of approximately 30 days with expenses paid from the SCAP Commercial Account.

We shall take a PAA plane which will arrive at 0100 on March 4 in San Francisco and leave at 2130 on the same day according to the time table. We, however, cannot expect the plane to be punctual and the error may be a matter of several hours according to my experience. Anyhow I shall get in touch with you by phone and if I have time I should like to come up to you. It has been my wish for nearly twenty years to see you and your laboratory and I am delighted at the thought that my wish will be fulfilled.

We do not know as yet our itinerary which will probably be fixed by the National Academy. I expect that we spend about a week around Washington, another week in New York and its neighbourhood and the rest of time will be spent in various parts of the States. On my way back

Dr. Lawrence:

to Tokyo, I should like to visit Berkeley again and spend a day or two. I am much looking forward to seeing you in person, not in picture this time.

With kindest personal regards,

Very cordially,

Yoshio NISHINA

YN:sy

September 25, 1950

Professor Ernest O. Lawrence
Radiation Laboratory
University of California
Berkeley 4, California

Dear Dr. Lawrence:

I am very ashamed of not having written to you since I came home last April, although my thoughts always come to you, your family and your Laboratory whenever I recollect the last journey to the States. It was indeed a great pleasure and privilege for me to have seen yourself and your family for the first time, which I wished to do for so many years. To come to the Radiation Laboratory was also a great delight for me, because I had been acquainted with the name and had been admiring the great achievements from its beginning. As I told you at the time of my visit, your laboratory and people gave me the greatest impression I had had of recent years. It is indeed a great thing that the Radiation Laboratory is already opening up a new epoch in the field of nuclear physics and your Bevatron now under construction will do a great deal towards the human understanding of the submicroscopic as well as cosmic world.

After coming home from the United States, I have entirely been taken up with the administration of my Institute and various Government and private committees. I may say I have no free time of my own. Since last June I have been working as Acting Chairman for the Foreign Investment Commission, which deals with the introduction into Japanese industry of foreign technology as investment in kind. This will help Japan build up its industry for the rehabilitation of general economy of the country. This absorbs a good deal of my time.

Some time ago the Tokyo radio broadcasting told us of your natural colour television, of which you told me at your home last March. We have not television here as yet. It would, however, be very interesting to introduce your method here in Japan, when the television is started in this country.

Professor Ernest O. Lawrence:

I thank you very much indeed for your recent sending of "Physical Review", "Journal of Applied Physics" and "Review of Scientific Instrument" from the beginning of 1949 up to the present. These make the whole series complete for each journal. It is not possible for private persons to buy such journals because of the lack of dollar fund in Japan. The journals are very useful for all in our laboratory, who benefit themselves a good deal and appreciate your kind thought.

Please send my best remembrance to Mrs. Lawrence.

With warmest personal regards,

Sincerely yours,

Yoshio NISHINA

P. S.

The international situation has changed a great deal since I saw you last. We are very glad that a great advance is being made at the Korean war front. We must be very firm against communism.

UNIVERSITY OF CALIFORNIA

RADIATION LABORATORY
BERKELEY 4, CALIFORNIA

October 30, 1950

Professor Yoshio Nishina
Scientific Research Institute
Komagome Bunkyo-ku
Tokyo, Japan

Dear Dr. Nishina:

I was very glad to hear from you and I can well imagine you are busy as Acting Chairman for the Foreign Investment Commission.

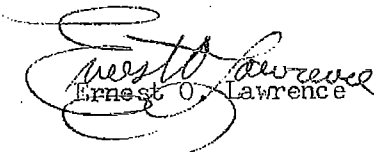
As regards color television, nothing would give me greater pleasure than to have my color television inventions put into use in Japan. There is no doubt about it that color television is quite superior to black and white but how soon it will get into general use is of course uncertain.

The Korean war situation is surely now well in hand and let us hope that recent developments mark a real turning point in history.

I suppose Sagane keeps you informed of his activities here. I want to assure you that he is doing some very nice work and we are delighted that he is able to stay with us for a while.

With warmest personal regards and good wishes,

Very cordially,


Ernest O. Lawrence

EOL:EI

財團法人理化研究所

May 17, 1951

Professor Ernest O. Lawrence
Radiation Laboratory
University of California
Berkeley 4, California

Dear Dr. Lawrence:

Immediately after I put down the telephone receiver over which I had been talking with you, I dashed to Dr. Dees' office of GHQ just to see you once more. But when I got there I found Mrs. Okawachi alone. Could you guess how I was disappointed? Only a few hours have passed since you left Japan, yet I am thinking of your next visit to Japan already. Nishina boys, Yuichiro and Kojiro, had a wish to have another chance to see you before departure, so they were quite discouraged to hear from me of your going back to the State.

It was indeed a great pleasure and privilege for me to have seen yourself. Your name has been so familiar to me since I started to work for Dr. Nishina 10 years ago. All the staff of our Institute you met are very grateful for your visit here during such a short and busy stay in Tokyo. Please try to come us again. I have several places in my mind to show you which will undoubtedly delight you. If I were Gen. Ridgway, Supreme Commander, I would issue a directive and command you to come!

With all good wishes,

Sincerely,

Lawrence 博士宛
(坂本社長様)

#486

May 23, 1951

Mr. Kiichi Sakatani, President
Scientific Research Institute
Bunkyo-ku, Komagome
Kamifujimae-cho 31
Tokyo, Japan

Dear Mr. Sakatani:

Home again, one of the first things I want to do is to thank you again for your cordial hospitality. I enjoyed so much calling on you and having an all too brief visit to your institute and the Japanese luncheon on Tuesday which you gave me was perfectly charming. I could not do justice to the Japanese food because of my awkwardness with chopsticks but, none the less, I appreciated the delightful occasion, the Japanese atmosphere and the great kindness and warm hospitality which you and your colleagues showed me.

After last seeing you, I learned from Dr. Yasaki that you do have available somewhere in Japan a sixteen ton Poulsen arc magnet which could be adapted for a cyclotron. It would seem to me, with the availability of this iron and the generators and the radio-frequency equipment in your institute, it should be possible to build a cyclotron in your institute without a great expenditure of funds. Such a machine I should judge would be capable of producing perhaps four million volt deuterons which would make possible a great deal of scientific work, not only in physics but also in chemistry, biochemistry, biology and in medicine. The biological and medical sciences would be benefited primarily because such a machine would be capable of producing substantial quantities of radioactive isotopes for tracer purposes. Should you undertake the construction of such a machine, may I assure you again that we would be more than glad to do everything we can to be of assistance.

Again, let me say how much I enjoyed meeting you and how much I enjoyed your cordial hospitality.

With all good wishes,

Sincerely,

Ernest O. Lawrence

C O P Y