



Prof. and Mrs. Bohr
at Kamakura,
when they visited
Japan in 1937.

From left :
Y.Nishina,
T.Hori
Prof. Bohr
T.Takamine
Mrs. Bohr
Hans Bohr
Y.Sugiura
M.Fukuda

Copenhagen,
Blegdamsvej 15. 5/12 1928

Dear Dr. Nishina

Thanks very much for your two kind letters. I was glad to hear that you have had a good journey to America. I hope the four weeks in America have been a good and interesting time for you. Just to-day I think you are starting for Japan; don't you look forward to see your own country and your friends there again?

Here everything is as usual; we have still Gamow, Mott and Hartree here; Hartree and Mott will leave in a week I think. Professor Bohr is so occupied by speaking with them every day, so he cannot get time to do his own work in the daytime; therefore we sometimes work in the evenings, last saturday I worked till half past eleven p.m. To-morrow there shall be a "Doktordisputats", (Mr. Højendahl) and Professor Bohr shall be "Opponent" (excuse me using danish words, but I don't know what it is called in English). But you have not forgotten the Danish language yet, I suppose! It is really a long time you have stayed here, but I have been at the institute for 9 years now, it is dreadful to think of, how quickly all these years have flown and how old one has grown.

Mrs. Bohr told me the other day, that Professor Hevesy has got a son. The baby-Bohr is still ill, I don't think he is improving a bit, poor little fellow. Do you see Mr. Kimura and Takamine, and perhaps also Sugiura, Hori and Aoyama? If you see them, please, give them my kindest regards. Now we have soon Christmas again, you have no Christmas in Japan, have you? If you have a little time to write and tell me about your getting on in Japan, I shall be very glad indeed.

I send you the very best wishes for the new year and hope you will

be in good health and good spirit; the kindest regards from

yours very sincerely
Betty Schultz

Institute of Physical and
Chemical Research
Komagome, Hongo, Tokyo

6th April, 1929

Dear Professor Bohr,

At the time when you receive this letter, you are, I suppose, in the middle of the Danish spring, which I used to enjoy very much and which I can visualize vividly.

Here we shall have cherry-blossoms in their full beauty in a week or ten days. In just a year we expect to welcome you here and hope you will enjoy our spring. We are very often speaking about your coming over here. One of the newspapers in Tokyo has written about it already. Professor Nagaoka is taking care about the arrangements, he asked me the other day whether you could stay longer than one month. We all wish that you could stay as long as possible. Professor Nagaoka expects to obtain ten thousand yen^(*) for your stay, although it has not yet been decided definitely as I have understood it. As soon as your plan is fixed, please let me know.

I am having a quite satisfactory life after marriage, but the marriage has had its consequences which have taken whole my time since then: All sorts of formalities, arrangements, family affairs and so on. I have thus been unable to do any physics at all, but hope soon to get into a serious work again.

I am sending you a small cigarette-box by parcel post. This is just to express my thanks for your kindness which you extended to me in all respects regarding my scientific as well as personal life while I was in Copenhagen. I should be only too pleased, if you would acknowledge the feeling of my gratitude through it. This will come to you certainly much later than this letter as they send the parcel post via Canada.

Takamine and Sugiura are in this Institute and Kimura in the University here. Owing to illness, Takamine has been absent from the Institute for about a month, but has now recovered and will soon begin his work again. Sugiura is calculating as usual and Kimura continuing his work in Copenhagen. Just a day ago Aoyama appeared in Tokyo. He is working at Sendai, he will set up a laboratory for low temperature investigation.

Whenever we meet to-gether, our conversation never end without coming to Copenhagen, which we all miss very much, especially I miss F lledparken and Langelinie, the parallel of which we have not in the neighbourhood of our Institute, so that I could take a nice walk when I get tired of my work.

With kindest remembrances and best wishes to all of your family and yourself, and all in your Institute too,

Yours very Sincerely

Y. Nishina

(*) One yen is two shillings at par, but it is about 10% below par at present.

København

April 10. 1929



Wilmosasti 7. København.

April 10. 1929.

Um Ihren Eindruck vollständig zu machen, schreibe ich ~~als einziger~~ (falsch) deutsch. Wir haben hier eine wunderbare Physikerkonferenz, bei der alle —besonders ich— Gelegenheit haben Ihre spezifischen Unarten zur Schau zu stellen. Schade dass Sie nicht hier sind. Sie hätten Ihre belle Freude davon! —Heute Abend bei Klein ich ein wenig Gelegenheit für mich, meine stark vernachlässigten menschlichen Qualitäten zu pflegen. Dies ist nur dadurch sehr erschwert, dass die

Leute mich immer erziehen wollen! Herzliche Grüsse

W.Pauli

April 10, 1929

Dear Nishina,

This little group of your old friends wishes to send you greetings from this country where you have been so long. Gerda and I and the children talk often of you and hope that in not too distant a future we shall see you here again. Thank you for your long letter. I shall soon write you again.

Many good wishes for the future

Yours,
Oskar Klein

The picture is made by Rosseland. Many greetings from me also, we will miss you this summer in the country. Probably we will go to the westcoast of Jylland together with my family.

Best wishes.

Yours,
Gerda Klein

Dear Nishina.

We are on a short trip to Copenhagen, occasioned by a physical conference at the Institute. We are glad to send you our best greetings, and wish you many happy days in Japan. Thank you for your kind greeting from Mount Wilson

Yours sincerely

S. Rosseland

Dear Nishina:

What are you doing these days? Have you already improved Japan? We are jointly enjoying the many advantages of Copenhagen, with which you are well familiar. Good luck 4, 3, 2, 1 now!

Kronig

Viele herzliche Grüsse! Hoffentlich sehen wir uns bald einmal wieder!

P. Jordan

Blegdamsvej 15, April 30 1929

Dear Dr. Nishina!

Thank you very very much for your most kind and interesting letter which I was so glad to receive a fortnight ago, and thanks also for the lovely book-mark you were so kind to send me. And I must send you the heartiest congratulations and best wishes for your marriage. Indeed, I was surprised when I heard that you had married and have thought so much

of you. It must be strange to be married to a person of whom one does not know much and before love has come, but I really hope you have had a good luck and have got a good and sweet wife. Don't you find it nice to have got your own home? It is a good thing that you have not found it so difficult to accustom yourself to the Japanese conditions again, which surely must be most different from those in Europe.

Believe me, we are all missing you very much here at the institute and speak often of you. Three weeks ago here has been a small conference of most of the physicists who have been working here the last years. Some of them had written and announced their visits in the Easter holidays and this gave Professor Bohr the idea of the conference. Prof. Kramers was here, and Ehrenfest, Pauli, Jordan, Kronig, Darwin, Holtsmark, Heitler, Nordheim, Mott, Rosseland and others. Gamow is still here, but now he will leave us in a few days. Dr. Trumpy from Tronhjem is here for 5 months and Dr. Hückel from Zurich is here for 3 months, both of them have their wife and a baby with them. It was a very busy time for Prof. Bohr during the conference, there were lectures every day during the week at 10 in the morning to 12, and then from 2 o'clock to 5-6 in the afternoon. Prof. Bohr opened the conference himself the first day, and thereafter there were lectures by Gamow, Heitler, Pauli, Klein, Darwin and Kronig. Dr. Fues, Waller and the Goudsmits were also here. The first evening they were here we were all invited to Prof. Bohr in the evening and the last day after the conference, it was Sunday the 14. April, we had an awfully nice excursion in two "Turist-Biler". We started from the institute at 9 30 and went to Hillerød, where we looked at Frederiksborg on the outside, there was not time enough to go in, then to Tisvilde where we got lunch in Professor Bohr's house and walked through Tisvilde Hegn to Brantekjerg and then along the shore to Tisvildeleje. I walked some of the time with Kronig and he spoke about the time where you and he were living in Tisvilde. Then we had a beautiful drive through Raageleje Gilleleje Hornbæk and Helsingør and then back to Copenhagen. It was a very nice day and indeed the only real spring-day we have yet had. It has been a very severe winter and even now at the end of April we have

still snow weather. I am sure it is better in Japan, the cherry blossoms must be lovely. How is your house? Is it a stone-house and furnished like the houses here or not? —Prof. Bohr is getting on well but he looks a little old I think, he is as usual working too much, but he is just as kind as he has always been, he is never angry always amiable, even if one does something foolish. Mrs Bohr's baby has come in a hospital now, he is still ill, can neither go nor say anything.

Do you think you will come back here in 2-3 years as you had thought of or will your marriage make alterations in your plans? We have had a young Chinese here for a few weeks. Dr. Chou, it is the first Chinese here has ever been. He was very nice, has now gone back to China, but thought of coming back in 2 years. There was taken a photograph of the conference gentlemen in the auditorium. I shall send you a copy, it may perhaps amuse you to see the old acquaintances.

I understand so well that you are very busy, and I can think that you have a lot of friends to write to, but I should be so glad to hear a little from you sometimes, when you have a little time left. A new-year's time I got a greeting from Mr. Kimura, it was very kind of him to remember me. Is he still quite well?

I am getting on well myself —the spirit is not always so good,— but never mind. I hope you are well and that you will be really happy.

The kindest remembrances and best wishes

Yours very sincerely
Betty Schultz

Meilguard 20. 7. 1929

Dear Nishina,

I am very much ashamed that I have not yet thanked you for your long nice letter, which we were so glad to receive, and for the beautiful box you sent us. It was much too kind of you to send us this beautiful gift, which together with the other things you have given us we shall keep as a remembrance of you. We are often talking of you and often missing you especially here in the country where we are reminded of last summer. I for my part do not least miss our discussions about scientific and other matters which have signified more for me than you may know.

We are now hoping that you will be much more happy in your home than you dared to think when you left Denmark. From your last letter we believe that this hope is not unfounded. We are very eager to hear from you, both about your life and your work.

This summer we are staying at Meilguard at the coast of Jylland together with my wife's family, which are all sending you many greetings. This is a very pretty place and quite as genuine country as Lundeborg and with better shore, so that we all enjoy the bathing.

From the laboratory there is not so much to tell. When I left, Bohr had just finished a small article of rather philosophical content for the Planck-Heft of Naturwissenschaften, which, I think, will interest you. I hope the reprints will soon arrive. — We had a short visit of the Rosselands one of the last days of May. They had been in Göttingen and he also in Paris for a conference, and looked all very well. He has soon finished his astrophysical book, and I believe they are going to Harvard for a year next September. — We have got a new very sympathetic and clever man to the laboratory, Casimir, a Dutch pupil of Ehrenfest. He is only 20 years but knows already a lot of physics. He may be of very great helps for Bohr.

You got a little greeting from our Conference in the institute? It was a pleasant time with so many of the old friends, but rather straining. Scientifically it had, I believe, the importance that several of us got rid of wrong attempts to cure Dirac's electron theory. As to this theory the difficulties still remain in spite of so many attempts to overcome them. For my own part I cannot leave speculating about this theory though it does not seem to lead to any other result than "Spintrubsinn" as Jordan calls it. In order to understand the situation I have tried to study the assumptions, on which Dirac's theory is based, a little more closely. As you know, Dirac takes as a fundamental assumption for the quantum theoretical one-body problem that the electric density should be represented by such a matrix that the "Eigenwerte" of the electric charge in an arbitrary volume at a given time should be 1 and 0 (the charge of the electron being taken as unit). Now the charge of the electron can be determined as well by electrostatic as by magnetic actions; and therefore it seems to me that the existence of elementary quantum of electricity requires moreover that the amount of electricity flowing through a plane during a certain time—in case of a free electron—should be a matrix with the eigenwerte 1 and 0. This assumption does not follow from the former assumption and the continuity relation for the electric charge since it would be too special to assume that the matrices, which represent the electric current vector and density at a given space time point commute with one another. Indeed, this would entail that the densities at a given point at different times would commute, which would contradict the general statistical character of quantum theory. Now I begin to believe that the assumption about the current matrix is not fulfilled in Dirac's theory and that this is connected with the difficulty with $\pm E$. If this is true—which I am not yet certain of—it might perhaps give some suggestion as to a modification of Dirac's theory.

You will remember the discussions about the spin of free electrons going on in the laboratory at the time when you left Copenhagen. Bohr has written several sketches to a note about this question, which I hope he will soon accomplish, since it contains some very interesting

considerations. The conclusion is that one can never detect any influence of Spin in experiments where the path of the electron can be followed, i.e., in the region of "geometrical optics" (ordinary mechanics); this does not exclude the possibility of a "polarisation" of free electrons,^(*) but we are not allowed to speak of a Spin magnetic moment of a free electron.^(**) Also about the question of the β -particles Bohr has written an interesting note, which he has not sent in either. He criticizes G. P. Thomson's considerations and points out that a lack of conservation of energy is quite contrary to the present form of quantum theory, but that it cannot be beforehand excluded due to the difficulties of the theory; on the one hand the lack of an interpretation of the size of the electron in the classical theory, on the other hand the difficulties of Dirac's theory in high fields (as for instance in my note in Z. f. Phys.). This was just to give you an idea of what we have been thinking of this year. I am very eager to hear about your own plans. Are you thinking about the Compton effect, where there seems to be many interesting problems yet? What do you say to Bothe's and Kolhorster's idea that the cosmic radiation is corpuscular? I have no great sympathy for the hypothesis of a transformation of matter into radiation, so I rather think they are right.

Now the kindest regards from all of us, also to your wife and to the other physicists.

Yours,

Oscar Klein

(*) Mott has written a paper in Proc. Roy. Soc. where he shows that a polarisation would occur in the scattering of electrons by a nucleus. Jacobsen has tried to find it, but so far has not succeeded.

(**) This result is most easily obtained from Dirac's theory, for instance the problem of reflection at a plane surface can easily be generally solved, the result being no polarisation.

Dear Nishina:

I just wanted to thank you so much for your beautiful gift, it was too kind of you to think of sending us such a pretty present. We often miss you!

Regards.

Affectionate

Gerda Klein

(Post card, Photograph of "TEUFELSBRÜCKE")

Treseburg of Harz

26 July 1929

Dear Dr. Nishina

I send you the kindest regards from Harzen, where I am spending my summer holidays. It is awfully nice here. Afterwards I shall be in Berlin for a few days and then back to the work. I think I shall stay by Prof. Bohr in Tisvilde the first days of August and help him with his work. I hope you are getting on well and look forward to hear a little from you when you have time

Yours very sincerely

Betty Schultz

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

Tokyo, 25th. Nov. 1929

Dear Professor Bohr,

It is a long time since I wrote to you last. I have had so much to do for last six months that I have been unable to write to anybody. I hope you and your family have been all very well.

Mrs. Bohr wrote to me in her last letter that the plan of your visit to America and Japan has not yet been fixed in detail. I wonder if you have made it more definite since then.

Professor Nagaoka wants to have a very rough idea about the possible time you and Mrs. Bohr could come over here. He will take care to obtain the sum of ten thousand(10,000) Yen, which, as I have told you, we intend to offer you. Since I wrote to you last, there has been a great change in the financial situation of Japan on account of the policy taken up by the new Government, the national thrift and the return to the gold standard, which will be carried out at the beginning of next year. The former policy is considered to be the way to arrive at the latter. This policy of the Government has shown its effects at every corner, and it might not be so easy as expected before to find the source of the above mentioned sum, we do not know as yet. This is the reason why Professor Nagaoka wants to know the very rough time of your intended visit. As soon as he gets the above matter arranged, I expect that he will send you a formal letter of invitation. I should therefore be very much obliged to you, if you would let me know whether you have made any definite plan about your visit to Japan.

Last September we had a visit of Heisenberg and Dirac on their way back to Europe. They gave several lectures each, which were of great benefit to us. To our regret, however, they stayed only two or three weeks, which were much too short.

With best wishes to you and all your family for a merry Christmas
and a prosperous New Year,

Yours very sincerely
Y. Nishina

Universitetets Institut
for Teoretisk Fysik

Blegdamsvej 15 København Ø
20th of December 1929

Dear Dr. Nishina!

I thank you so much for your most kind and interesting letter which I received the other day. It was awfully kind of you to take time to write to me, although you are so occupied with your work. It was so interesting to hear about your Japanese house, and how you are getting on.

We have also had an awfully busy time this autumn. In my summer holidays I had a very nice trip to Germany together with a lady friend of mine, we stayed in Hamburg and Berlin for a few days and spent the rest of the time in Harzen. Coming home I went at once up to Tisvilde and stayed there by Professor Bohrs' for $1\frac{1}{2}$ week. There should be a meeting of Scandinavian scientists here in Copenhagen in the end of August and Prof. Bohr had to open the meeting with a lecture, so the whole time in August was taken up with the preparations for this. The opening-meeting was held in Raadhuset and I was there and heard Prof. Bohr's lecture; the meetings took a week in all and every day lectures were given of the physicists here at the Institute.

After that time we were still more busy, as Prof. Bohr should write an article to Universitetets Festskrift. He had postponed it long time, as he had hoped another professor would have overtaken the task, but unfortunately he could not, and Prof. B. had to do it himself. There

could not be time enough to write something new, therefore he used three papers he had written to Naturwissenschaften in the last years; they were translated into Danish by Dr. Klein, Hr. Møller and Prof. Bohr; I had to short-hand write and typewrite it all, so we worked many evenings and sundays too on it.

Next year there is, as you perhaps know, a possibility of O. Klein's leaving us in order to go to Stockholm and be professor there, but it is not decided yet whether he or one of the other three will get the position. We will miss him very much, especially I think it will be a great loss for Professor Bohr. There is at present a young dutch physicist, Casimir, former assistant of Prof. Ehrenfest in Leiden; he has been here for some months, is living at the institute in the guest-rooms. He is a very good help to Prof. Bohr, and we hope he will stay for some time. Prof. Ehrenfest was here for a few days a fortnight ago, and Professor Richardson from London has just been here with his wife and daughter on his way home from Stockholm, he has got the Nobel prize this year, i.e. the half of it I think, de Broglie got the other half. We were all by Prof. Bohrs last monday night together with the Richardsons.

We have had unusually fine weather the whole autumn, up till now it is still very mild and now we have already Christmas. The Christmas tree is standing in the front of Raadhuset, and the shops are open until 9 in the evening, all people are so busy with their preparations for the Christmas-days. I myself don't like Christmas much, Christmas songs and trees and all such things make me feel melancolic. I shall spend Christmas evening by my uncle and aunt and the other days by some friends, so perhaps it will be rather pleasant nevertheless.

Surely I shall write again and tell you what happens in the Institute. I quite understand that you have not time to write so often but I am very glad to hear from you when you have time, your letters are so interesting, so I read them several times and keep them. Will you bring my kindest regards to Mr. Kimura, Takamine and Sugiura, when you

see them.

The kindest regards and the best wishes for a happy new year for yourself.

Yours very sincerely
Betty Schultz

Universitetets Institut
for Teoretisk Fysik

Blegdamsvej 15 København Ø
December 26 1929

Dear Dr. Nishina,

It was a great pleasure to hear from you. I have for a very long time intended to write and before all to thank you for your beautiful box, which to my wife and me is a nice remembrance of your long stay in Copenhagen, of which we all think very often. I have only postponed to write, because I hoped at the same time to be able to tell you of my plans and the time of my intended visit to Japan. All this year, however, I have been very occupied with duties among which have been the preparations for a University "Aarsskrift" of which I send you a copy at the same time as a little Danish greeting. Due to this situation I had to postpone my journey to America and Japan in 1930, but if it suits your authorities, I shall be delighted to come in the spring of 1931 and to stay a month's time in April and May. I would propose to give a course of lectures on the fundamental problems of quantum theory to which I have given much attention in recent years. My wife as well as myself look forward very much indeed to seeing your country and our old friends among your countrymen again. We are just having Christmas where the whole family have been talking of you, and we all send you and your wife our heartiest wishes for a happy new year.

Yours
N. Bohr

Tisvildeleje, August 4th 1930.

Dear Nishina,

I am very sorry to have delayed so long in answering your kind letter regarding my visit to Japan, but due to various unsuspected University duties here I have not hitherto been able to make the necessary disposals for my journey. As you know, I had hoped to come to Japan next spring, but I have just realised, that due to my work and duties here I shall not be able to leave Copenhagen for a sufficient length of time during 1931. To my regret I have therefore to postpone my visit to Japan to the spring of 1932, and I hope that this change in my plans will not be inconvenient to your university. As for the same reason I have also had to postpone a visit to America, my wife and I intend in 1932 to travel round the world through America and to spend a month's time in Japan. We look both forward to see our old friends again and to learn about your country, of which we have recently had most enthusiastic accounts from Heisenberg and Dirac. As regards my lectures in Japan I propose to give a course about the principles of atomic theory. In the last years I have given much thought to this subject, and I hope in a near future to publish my views in book form.

In the institute we miss you very often, but I hope that you have found good working conditions in Japan. You will be interested to hear that Jacobsen is just trying some experiments to ascertain, whether the anomalies in the scattering of various elements for hard radiation found by English and German physicists are real. So far, his results point to the non-existence of these anomalies, but as soon as his conclusions are more definite, Klein or he will write to you about details. They both send their kindest regards, and also Miss Schultz, who is at present here in Tisvilde, asks me to send her greetings and to say, that she will soon write herself. All the boys, who have not forgotten your play

with them in the forest, join my wife and me in sending our kindest regards and best wishes to you and your family.

Yours

N. Bohr

Universitetets Institut
for Teoretisk Fysik

Blegdamsvej 15, København Ø.
May 22nd 1931.

Dear Nishina,

First of all I want to thank you and the other collaborators of the institute from your country most heartily for the very beautiful vase you sent my wife and me at the occasion of the 10 years anniversary of the institute, and which will always be a treasured remembrance to us. For an institute 10 years is of course only a short time, but I was very thankful that so many of the old collaborators had remembered the anniversary and for the kind feelings shown me from many sides by this occasion, where I had much opportunity to think of all the support everyone of the collaborators in his own way has given to our endeavours. We often talk of you, and it would be a great pleasure for everyone if you once more had opportunity to come to Copenhagen. My wife and I look also forward very much to our visit to Japan, and I am very sorry for the repeated delay of our journey which has been caused, however, by various unsuspected duties which have not made it possible for me to leave Copenhagen for the required long time. Even now our plans are somewhat unsettled on account of the change in the staff of the institute resulting from Klein's appointment in Stockholm. Of course it has been a great pleasure to me that at length he got this post in his own country which he has so well deserved, but as you will know, his departure is a great loss to us, although in Møller, who is developing very promising indeed, we hope to find a good successor to

his post. I look forward, however, to the opportunity to discuss and settle the plans of my visit to Japan with Nagaoka, from whom I have just had a few lines from Berlin, and whom we expect here in the course of a week's time. When I have seen him, I shall write again.

This time I will only once more repeat the heartiest thanks to you all with the kindest regards and best wishes from my wife and myself.

Yours

Niels Bohr

6. XI. 1932

Dear Professor Bohr,

It is a long time since I received your kind letter as well as an interesting card from the excursion in Nord Jylland on the occasion of Professor Hevesy's visit to Copenhagen. In response I intended to write to you at that time, but was unable to do so on account of my illness, which took about six weeks (November 1931 - Jan. 1932), and made me very busy after recovery owing to the accumulation of everyday business. Since then I have been lost in silence among my friends in Denmark.

How are you and your family? I suppose you live now in "Oresboligen paa Carlsberg" of which Miss Schultz wrote to me nearly a year ago. I hope you have more time of your own there. Are there many people working there?

How is the Institute at Blegdamsvej? Heisenberg wrote to me last summer that he was looking forward to visiting Copenhagen in September when Lord Rutherford would come over to you. That meeting must, I suppose, have been very interesting as well as fruitful in view of the

present state of nuclear physics.

In our Institute I have got a room of my own for experimental work and am preparing to do some work on nuclear problems as well as cosmic rays. I hope to get some results in course of time, but it will, I expect, take some time before we get into any interesting work. The difficulty we meet here in Japan is the lack of fund for such a scientific work. We feel it especially accute at the present time when our currency has depreciated to less than one half the normal value.

I wonder what you are thinking of your journey to America and Japan. We have all been looking forward very much to seeing you and Mrs. Bohr here in Japan, and I should like to know whether you are thinking of realising your long planned journey. If so, please let me know beforehand the time of your projected arrival in this country.

Yours sincerely

Y. Nishina

6. XI. 1932

Dear Miss Schultz,

First of all I must apologize you for not having answered to your kind and interesting letters which I received last year. When I think of Copenhagen, I have always had a very bad conscience that I have not written a word to any of my friends. I have a bundle of letters lying on my table for a year or so and I think I must now begin writing no matter how busy I am everyday. Since I wrote to you last -- I do not remember when it was, I have had so much to do with the work in our Institute, where I have now a room of my own for experimental work so I can do some work. Of course this takes very much time of me and that is

the chief reason why I have been unable to write to you.

At the end of last November, about a year ago, I became ill and for about six weeks I was in a hospital where I spent Christmas and New Year. That was not very pleasant. After that illness I was not quite well for a few months, during which different business had accumulated and took me much time to finish. Now I am quite well and working all right everyday.

At home I am now a father of two boys. The second boy was born last May and getting on very well although he has taken cold just at the present. The first boy is $2\frac{1}{2}$ years old now and speaks a funny language which makes us laugh.

How are you since I last heard from you? I hope you are in the best of your health and happy in your work. I suppose Professor Bohr lives in "Oresboligen paa Carlsberg", as you wrote to me. How is he and his family? I do not know if he has decided to go on to his long planned world journey. We have been expecting him here for a long time and I should like to know whether he will come here next year.

How is the work going on in the Institute? Are there many people now? Please remember to all our mutual friends.

With best wishes and remembrances

Yours sincerely

Y. Nishina

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

TOKYO, 7. April, 1933.

Dear Professor Bohr,

I have read in a certain American journal that you are going to visit Chicago this summer. I do not know whether it is true or not. If so, I wonder whether you have any intention of extending your journey over to this country, where we all have been, as I so often written to you, looking forward to your long planned visit. If you come, please let me know when we could expect you here.

I wrote to you at the beginning of last November and as I have not heard from you, I presume that you have been very busy as usual. Has the annual meeting of old Copenhageners taken place this year in the Institute? I wish I could be present there.

I have lately finished together with my assistant a calculation on the scattering of neutrons by protons on Heisenberg's theory of nuclei making a certain assumption of their interaction energy. I hope soon to publish it in the Scientific Papers of our Institute.

I should be very much obliged to you, if you would send me, in case it is possible for you to spare, a separate copy of each of the following papers:

- 1) Your Faraday lecture
- 2) Your lecture at Rome Congress on nuclear problems
- 3) Møller's work on the collision problem

I hope that this letter will find you and your family in the best of health. We are getting on all right in my family. My wife joins me

in sending kindest regards and best wishes to your family and yourself.

Yours sincerely

Y. Nishina

7. IV. 1933

Dear Miss Schultz,

It is a long time since I last heard from you. How are you? I hope you are quite all right. I saw in a certain American journal that Professor Bohr is going to visit Chicago this summer. Is that true? If so, you must certainly be very busy for different preparations.

Is a meeting of old Copenhageners taking place this year in the Institute, as has been usually the case at this time every year? Through different publications I understand that a good many able physicists have lately stayed in the Institute. Has there been much change in the Institute?

To-day I have also written to Professor Bohr and asked him to send me, if possible, a separate copy of the following papers.

- 1) Professor Bohr's Faraday lecture
- 2) Professor Bohr's lecture at Rome Congress.
- 3) Dr. Møller's papers

Annalen der Physik, Bd. 14, S. 531, 1932

Zs. f. Phys. Bd. 70, S. 786, 1931

I do not know whether you have any of them still left, if there is any which you could spare, please send them to me.

I am quite all right but am very busy with different matters

concerning our laboratory work, on account of which I have very little time to write letters to my friends. Does Dr. Klein come often to Copenhagen? I have received his very kind letter a long time ago, but I have not yet answered to him, and I have a very bad conscience. I am thinking of writing to him soon.

In my family all are going on all right. The boys are growing up gradually. It is very interesting to observe how they grow and how they begin to do different things.

I suppose that this letter will come to you when the Danish forest is in a fresh green. I cannot forget that beautiful colour, which brings me back all nice remembrances of what I have had in Denmark.

Please remember me to all in the Institute, who I hope are working very well.

I hope that this letter will find you in the best of your health.

With best wishes and kindest remembrances,

Yours sincerely

Y. Nishina

København 26/4 1933

Dear Dr. Nishina!

I thank you so much for your very kind letter, which I have just received, and also for the former letter, which I feel much ashamed having not answered long ago. But I think you will understand how busy I have been the whole winter and spring, when I tell you that Prof. Bohr

has now really left for his journey to America. He left on the 19. April together with Mrs. Bohr, and they go over England to America, where Prof. B shall lecture in Baltimore, Philadelphia, Ohio, Pasadena, Ann Arbor and also at the Chicago exhibition. On account of the journey there was no time for the usual Easter conference this year, but it will take place in September instead. It is a very bad thing, that Japan is so far away, it would have been so nice if you could come too for the conference, it is always so pleasant to see our old friend again. This year we have had Dr. Kopfermann from Berlin, Dr. Weisskopf, Dr. Placzek, Prof. Rosenfeld and a young Indian Chandrasekhar, here. Also Bloch and Delbruck have been here for small visits. Ebbe Rasmussen is this year staying in Berlin on a Rockefeller stipend. Prof. Klein was here in December to help Prof. Bohr with a paper on Light and Life of which I send you a copy, which may perhaps interest you. Here has not been much change in the institute, Dr. Jacobsen, who asks me to be remembered to you, Ebbe Rasmussen and I are still assistants, and Chr. Møller is Lektor in Klein's place. Also S. Werner is still working here. Dr. Jacobsen and his family are now living in Professor Bohr's old house, after they have gone to Carlsberg. On the older side of the institute, opposite Prof. Bohr's house they are at present building a mathematical institute in connection with our institute, the mathematicians shall use our lecture-room and we shall get a few laboratory rooms in the basement of the new institute instead. Prof. Harald Bohr is the leader.

I am glad to hear that you and your family are in good health. I would like very much to see the boys, I am sure they are lovely. I thought very much of you by reading in the newspaper about the awful war, but you have not been in war? have you? And how about Kimura and Sugiura and Aoyama? I hope none of them have been in the war.

I don't know whether Prof. Bohr has written to you from his journey. He has spoken very often of writing, but you know how it goes sometimes, he intends, I think, to propose to go to Japan in 1935, then Christian will be student and go with him as secretary; I think that is

the intention, if it suits you. All the Bohr-boys have grown up very much, Christian is quite a young man now. Aage and Ernst are big boys too, but still very sweet. The Kleins have in the autumn got a little girl, they have now 5 children.

I have myself been a little tired and nervous in the winter, but now I hope it will be better, when Prof. Bohr is away, there is not so much to do, and I can go every day early in the afternoon. The forest is not yet green, but it will come in a few weeks. Dr. Kopfermann and his wife who shall be here the whole year, are now living in Hellerup by Erik Thalbitzer, where Kimura stayed, when he was here.

I send you by the same post as printed matter the reprints you wished, and send the kindest regards and best wishes for you and your family.

Yours very sincerely
Betty Schultz

P.S. I shall not be so slow in letter writing in the future.

18. VII. 1933

Dear Miss Schultz,

I thank you very much for your very kind and interesting letter of the 26th April. I have not heard from Copenhagen (the fault is mine) so long that everything was obscure to me, and your letter brought to me all what I wanted to know. I felt as if things were shown under the day light. I intended to answer to you soon, but 7 weeks have since then gone away.

I am very glad to hear that you are very well now. How is the

weather this summer in Copenhagen? Have you gone away for holidays? How are they getting on in the Institute?

I have not heard from Professor Bohr in America. A few days ago, Gamow in Leningrad sent us a telegram and asked us if we could invite Professor Bohr here in August then they would do so in September on his way back to Copenhagen. But August is a bad season here, it is too hot and is not nice for Professor and Mrs. Bohr to travel round at the earliest September. We sent a wire to Russia informing them of these circumstances, we have not heard from them any more, so I think they also have given it up. I knew from your letter that Professor Bohr will be back in Copenhagen for September conference, therefore it is not possible for him to come to Japan and stay until October. If he could, we would have invited them here. Moreover, I know from your letter that Professor intends to come to us in 1935, so we thought it better to wait until he has more time to stay here. Professor Bohr told to Professor Nagaoka a few years ago that he will visit us in 1933, so we had expected him here this year until I received your letter from which we learned that he is not coming this year. Professor Bohr has not written to me for a long time and it was difficult for me to know whether he comes to Japan or not. If he comes, we have to do some preparations for different matters. I hope Professor and Mrs. Bohr will carry out their long planned journey to Japan in 1935, and if so, I should like to know it beforehand. If he cannot write to me, please you let me know. Even if he does not come, we should like to be informed of it as early as possible.

You wrote to me in your last letter about the war. It is not so bad at all as you think it in Europe. We do not take it so serious. You asked if we have been to war. No, none of us has the least chance of going to war. We are all doing physics as peacefully as ever. Only difference is that Japanese currency has gone down nearly to half its normal value and it is very difficult to buy things from abroad. Apart from such economical questions, we are all getting on very peacefully and very well.

Have Dr. Klein and his family come to Copenhagen this summer? I have really a very bad conscience that I have not answered his kind letter. When you see them, please apologize it for me and tell him that I am writing as soon as I get time to do it.

All the reprints you have sent to me last time are very useful for me and I should be much obliged, if you would send me in future the separate copies of papers published from the Institute.

It is very hot now in Tokyo and is very disagreeable, but in my family everybody is getting on all right. About a month ago I went to the north part of Japan (Hokkaido) to give regular lectures to University students there, lectured 2 or 3 hours a day and did it for a fortnight. It was rather tiring. I have to do it again in September.

I send you my best wishes and kindest remembrances.

Yours sincerely
Y. Nishina

P.S. Please remember me to Professor and Mrs. Bohr when they come back and also to all in the Institute.

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

TOKYO, 19. July, 1933.

Dear Professor Bohr,

As I think that this letter cannot catch you in America, I send it to Copenhagen. Some days ago, Gamow sent us a telegram asking whether we could invite you here in August on your way back to Copenhagen. If

we could, they would invite you to Russia in September on your way home from here. The month August, however, is very hot and is not agreeable both for lecturing and sightseeing. One must wait at the earliest till the middle of September. To this effect we answered to Russia and we do not hear any more from them. We know that it is probably not possible for you to stay here from the middle of September to the middle of October say, because Miss Schultz wrote to me at the end of April that you intend to have a meeting of old Copenhageners at Blegdamsvej in September. Otherwise we would have invited you here in Japan. I heard that you intend to come here in 1935, is that your plan? You know that we all have been waiting to see you here in this country and I really hope that you will carry out your plan as early as possible.

I suppose that you have had much to discuss and to see in America and that you are now glad to come home to have a peaceful rest.

Sending best wishes and kindest regards to Mrs. Bohr and yourself also from my wife,

Yours sincerely
Y. Nishina

Universitetets Institut
for Teoretisk Fysik

Blegdamsvej 15, København Ø
6 Novbr. 1933.

Dear Dr. Nishina!

I thank you so much for your kind letter from July 19. I am quite astonished that so long time has passed since I got it, but time flies so quickly. It was all right what you wrote about not inviting Prof. Bohr to Japan and Russia this summer, he could not have come, he has not later spoken about going to Japan in 1935, but I think it is his

intention. He will write to you himself; every time we are writing a list of letters to be written, your name is there. Prof. Bohr says "We shall write to Nishina, put him first on the list, we write to-day or to-morrow", — but you know, how it goes. This fortnight Prof. B has been in Brussels for the Solvay conference and before that he was very busy with the proof of a work of him and Rosenfeld which I think will soon appear. And in September the conference took much time, here were plenty of people this year, 44-45 foreign guests, all the old ones, Kramers, Heisenberg, Fowler, Dirac, Heitler, Klein, Casimir and many others. Have you heard the sad news of Professor Ehrenfest's death? He was here during the conference and lived by Prof. Bohrs at Carlsberg, but seemed rather depressed, and 4 days after he left we heard, that he had shot himself and his son. It was terrible, we were all quite shocked to hear it. Also Mrs. Maar has died; she was suddenly taken ill and died after 4-5 days. Do you remember Mr B. B. Ray? Yes, you do, he was here at the same time as you, he was here on a small visit a few days ago, he is going to work with Prof. Siegbahn in Upsala for the winter, and stayed here for a fortnight to see Prof. Bohr, but unfortunately, it was just the fortnight where Prof. B was in Brussels, so he did not see him. Ray looked quite like himself 7 years ago, it was funny to see him. Klein has been here for short visits, during the conference and once before, but Mrs. Klein I have not seen for very long time. You know they have got a daughter too, 5 children in all have they. Kramers has got a son this summer and was very proud of him, and Kuhn had, when he was here in September a daughter of 3 weeks. — We have had an unusually fine summer this year, even from May and up till September it has been summer, we have not had such a summer since 1914. I did not go far away this summer in the holidays; it is so difficult to travel in Germany at present, and our Danish crown is of so little value that most people stayed at home this year. I spent my holidays at the seaside, by some friends in Lisleje and enjoyed the water and the heat very much — Have I told you that a mathematical institute has been built in connection with our institute. Prof. Harald Bohr is director of it. Prof. Bohr thinks that it shall be good for everything but it looks bad, quite spoils the good appearance of our institute. I enclose

a small picture of the old institute, if you cannot remember any longer how it looked.

Gamow was here a few days on his way to Brussels with his wife, she was very young and sweet, but she spoke only Russian, so nobody could speak with her.

Now I will only send you the kindest regards and hope that you and your family are still getting on very well.

Yours very sincerely
Betty Schultz

Universitetets Institut
for Teoretisk Fysik

Blegdamsvej 15, København Ø.
January 26th 1934.

Dear Nishina,

I know that you won't think we have forgotten you, although I to my great regret have not written to you for so long. Indeed, in the laboratory we miss your experience and helpfulness constantly, and besides we are in our theoretical discussions almost daily reminded of the beautiful work you made just before you left in collaboration with Klein, whom you know that we also miss very much after he left us for Stockholm, from where we still often enjoy a short visit of him. The famous formula which was the result of this work is not only, as I need not say, the basis for the interpretation of the scattering measurements in which we —not least due to Jacobsen's work— are intensely interested, but the striking confirmation which this formula has obtained became soon the main support for the essential correctness of Dirac's theory when it was apparently confronted with so many grave difficulties. You can imagine the enthusiasm with which we here as

everywhere have followed the marvellous recent development of Dirac's views and the discovery of the positive electron. Just in these days Jacobsen has got some beautiful Wilson photographs of positive ray tracks produced by γ -rays in Argon, and Williams, who is at present working here as Rockefeller fellow, has just sent a note to Nature about some scattering experiments which gives an independent support for the view that the so-called nuclear scattering of γ -rays is essentially due to the annihilation of positive electrons produced by the rays in the scattering material. Of theoreticians are at present besides Møller, who is now Klein's successor as Lektor, Rosenfeld, Teller, Placzek, Plesset and Weizsäcker working here. We are at the moment especially interested in the problem of the limitation of the correspondence methods of quantum theory. By the same post I am sending you a copy of a recent paper of Rosenfeld and myself on the measurability of electromagnetic fields in which we have shown that the current criticism of the quantum electromagnetic theory is not sufficiently well founded. As stressed in our paper, we get, however, thereby not closer to the solution of the fundamental problem of the proper harmonising of the field theory and the atomic theory, and at present I am occupied with the closer study of the peculiar limitation of the correspondence argument with which this problem presents us.

Although I think that you may be interested to hear a little about what is going on here, I shall not on this occasion tire you further with such details and shall pass to the other point, of which I have still worse conscience not to have written to you, namely the kind invitation to come to Japan. My wife as well as I have all these years been looking forward very much to this journey and have been very sorry to have had to postpone it for so long due to my many obligations here and unforeseen arrangements as our journey to America last spring, where I had to go as official representative to the scientific meeting in connection with the world exhibition in Chicago. Also at the moment I have much to take care of in connection with the extension and reconstruction of the institute, but after this there is no hindrance for our journey and if it suits the Japanese institutions we should take

great pleasure in coming to Japan in the spring of 1935. This summer Christian will also have passed his student examinations what will make it easier for us to travel so far, and we have even thought to take him, who intends to study physics, with us as my secretary at the elaboration of my lectures in Japan. As regards these I propose to give a survey of the evolution and present state of the principles of atomic theory, and I think that I could give a fairly rounded exposition in about 8 lectures or perhaps a few more extending over about a month's time. I should be very glad to know, if this is suitable and should also be much obliged if you would write to me, how it stands now with all practical aspects of the invitation and about what advice you may be able to give us about our journey and about the best time for our visit to Japan.

With kindest regards to yourself and your wife and all common friends in Japan from all in the institute and from the whole family,

Yours,

Niels Bohr

The Institute of Physical and
Chemical Research
Komagome, Hongo, Tokyo

TOKYO, 21. March, 1934.

Dear Professor Bohr,

I thank you very much indeed for your kind and interesting letter of the 26th. January, which, to my regret, I have not been able to answer owing to different reasons for about three weeks.

First of all we are all very pleased to hear that you are going to realize the long planned journey to Japan in the spring of 1935. We shall be much delighted to welcome Mrs. Bohr and yourself together with

Christian in our country.

As regards your lectures to be given here, we agree to your proposal with much pleasure. As you know, we are situated very far from the centres of the research activities in the modern physics and we wish very much to avail ourselves of this opportunity and come into contact with the latest developments as well as the new tendencies in the quantum theory. We should like therefore to have also some occasions for free talks and discussions on various problems.

With respect to the best time of your stay in Japan, I should suggest you to be here between the beginning of April and the end of May, in case you come in the spring as you wrote to me. The corresponding time in the autumn would be between the beginning of October and the end of November. Cherry trees blossom usually from the beginning till the middle or down to about the end of April; it depends on the weather of the year and the place in Japan. Other flowers and blossoms come usually in April and May or in June and trees become green usually at the end of April. The rain season begins at about the middle of June and lasts for nearly a month, after which the hot season sets in immediately.

I do not know which route you would like to choose in coming to Japan. There are three ways. The shortest one would be through Russia and Siberia. It is a long train journey and takes a little more than a fortnight. The railway fare (1st. class) is roughly 560 pounds sterling per person excluding charges for meals and probably for sleeper too. The second one is via Canada or the U.S.A. and you know the way except the Pacific Ocean, which takes between 10 and 16 days according as the steamer and the route you choose (Vancouver → Yokohama, Seattle → Yokohama or San Francisco → Hawaii → Yokohama). This journey takes about 25 days. The through fare (1st. class all the way) 90 pounds sterling excluding charges for express train, sleeper and meals in Canada or the U.S.A. The third one is to take a steamer either from England, from Marseilles or from Naples directly to Yokohama via Suez,

Ceylon, Singapore, Hongkong and Shanghai. It is a long journey and takes about 37 or 43 days from London and 33 or 38 days from Marseilles. It depends on the steamer. The fare is about 100 pounds sterling per person. Your choice largely depends on your taste and also on what arrangements you might make en route. I am sending you by a separate post some sailing schedules, tariff lists and plans of some steamers belonging to the Nippon Yusen Kaisha (N.Y.K.), a Japanese steamship company for these journeys. If one makes use of the special round-the-world tour arranged by the N.Y.K. (probably by other steamship company too) the fare (1st. class) per person for the whole round journey (London → Indian Ocean → Japan → Pacific Ocean → Canada or the U.S.A. → Atlantic Ocean → London) is about 166 pounds sterling excluding charges for express train, sleeper and meals in Canada or the U.S.A. The ticket is valid for 24 months from the date of departure.

As regards the amount of money we offer you, it was ten thousand yen when we invited you at first, as you might remember; this made about a thousand pounds sterling at that time. Since then, however, much change has taken place in the financial situation of the world. Japanese currency has depreciated very much and at present ten thousand yen makes only five hundred pounds sterling roughly. The cost of living and of general things inside Japan has nevertheless remained the same or gone up a little if any. This means that it is very difficult for us at present to make any contracts with or buy things from western countries. The ten thousand yen in Japanese currency which we offered you long ago, is of course still valid but we do not know as yet whether it is possible for us to increase the sum in view of the depreciation of yen. I have talked it with Professor Nagaoka who supervises the whole matter, but we did not come to any positive conclusion. Ten thousand yen is decidedly insufficient for the expense of the whole journey for three persons, as you see from the above description of the fares and we are trying to increase it, but we do not know yet how far it is possible to do so under the present financial conditions. This is the essential point and as long as it is not settled, our invitation is incomplete. As soon as the problem is settled, I shall write to you; but it does not

seem to be done quite soon and I have made up my mind to write this letter already before its final solution, in order to give you beforehand the idea about the situation, which may of course change better or worse before next year; we can not foresee it. In any case it is our next step to inform you of this point.

I hope I have written as much as possible about what you want to know. If you want anything more, please do not hesitate to write to me, I am very pleased to give you any information. In case you decide anything either in the positive or in the negative, please let me know as soon as possible, because I have to do arrangements and to be ready for what you want to do or not to do. As regards the arrangements for your journey, I shall do anything for you if you like, please let me know.

I was much interested to hear from you what is going on scientifically in your Institute. Your joint work with Rosenfeld arrived here some days ago, I have not read it yet but am very much interested to do so. We shall soon have discussions on the paper in our laboratory. The development and the difficulties of the quantum electrodynamics have absorbed our attention ever since Dirac and Heisenberg came here. We have had recently discussions on the works of Born and Wentzel but have not come to any conclusion. Their efforts for the modification of the classical electrodynamics itself can be well justified but we could not find out whether it was done in the right direction.

Since I came back here in Japan, I have been chiefly interested in the atomic nucleus and the cosmic rays. I and my assistants calculated some time ago the absorption of neutrons through matter; we have not published the results but hope to do so soon. We made also some calculations on the collision (elastic as well as radiative) between the proton and the neutron. The results depend however, much on the exact mass of the neutron, which seems to be unsettled at present and we have therefore postponed the publication for nearly a year.

Ever since the discovery of the positive electron by Anderson, we have been much interested in its theoretical interpretation. We published here in Tokyo a short note on this problem in July last and we found later that different people explained it in the same way - on Dirac theory. For nearly a year we have been doing calculations on the probability of the photo-electric production of positive electrons. It has taken a long time but we have at last obtained the final results, among which we have some to be compared with those of Oppenheimer and Plesset as well as of Heitler and Sauter. Our results are quite different from the former but agree with the latter.

In the experimental side, we began about two years ago to make the study of cosmic-ray particles by means of the Wilson cloud-chamber placed in a magnetic field. We designed the apparatus in such a way that two Geiger-Muller tube-counters in coincidence actuate the expansion of the chamber and get automatically the photograph of the particle which started the coincidence of the counters. We found later that Blackett and Occhialini had started the same work based on exactly the same principle and obtained the well known results. It has taken a long time for us to have the apparatus in working conditions but in November last we succeeded at last in getting good photographs of cosmic-ray tracks, we are trying now to get more interesting results.

Quite recently we have also examined with a Wilson chamber the artificial radioactivity of Curie-Joliot and Joliot. We found the similar energy distribution and energy limit as was reported by the French discoverers. It is altogether a very interesting phenomena.

We have been also making preparations for the study on the artificial disintegrations of light nuclei with protons and deuterons. The progress has been slow but hope to start the experiments very soon. We are also doing experiments on the loss of energy of neutrons as well as positive electrons in passing through matter. The above is the all what is going on in my laboratory. As you see, they are all in a preparatory stage; we hope to get some interesting results which we can show you

when you come here.

With kindest regards to Mrs. Bohr, yourself and your whole family from my family and myself, and with best wishes to all in your institute,

Yours

Y. Nishina

Universitetets Institut
for Teoretisk Fysik

Blegdamsvej 15, København Ø.
5th of July 1934.

Dear Dr. Nishina,

I must just write you a few words to tell you about the very sad accident which has just happened. Professor Bohr's eldest son, Christian, has died last Monday, drowned on a sailing trip to Norway. Every summer Prof. Bohr sails for a fortnight with Prof. Bjerrum and Dr. Chiewitz and Mr. Hendriksen in Prof. Bjerrum's boat, and they started last Sunday for a trip to Norway; Christian should be with them only to Norway where he should join some of his friends for a walking trip. It was blowing rather hard both Sunday and Monday, and Monday evening when they were outside Varberg in Sweden Christian was thrown overboard by the waves and drowned. They stayed for some time with the boat and tried to find him, but did not succeed, so he has not yet been found. Prof. Bohr and Prof. Bjerrum went home in the night to Tisvilde, where Mrs. Bohr and the other children had just come. They are of course awfully depressed. Christian has just been a student, had got a very fine examination last week. We are all very sorry, can hardly think of anything else.

We have Prof. Franck here now for some years, and also Prof. Hevesy

will come in the autumn with his family and stay here. Otherwise everything is going on as usual.

While I am writing I should just ask you, do you think there is any possibility for a young Danish girl to get a position as nurse in Japan? It is a young lady of my acquaintances, who has a position in an office, but she is tired of it and has always wished to go out and see something else, she has been in England for some time, but now it is not possible for foreigners to get positions there, and she also wishes to go much farther away, and she thinks Japan must be the most wonderful place to live in. It is not very likely, that Japaneses would have a Danish nurse, I suppose? But when you once write to me, you will perhaps tell, if it is quite out of question; I suppose it is, but I promised her to ask you.^(*) I hope that you and your family are in good health. We have had very fine summer weather here since beginning of May, so I hope it will continue so also in my summer holidays. I had thought I should have quite a long holiday this year, because Prof. Bohr after his sailing trip intended to go to Island for some weeks together with Hans and Christian, but now he has given up everything of course. They will stay in Tisvilde, and Prof. Harald Bohr told me just that he would take the two smallest boys with him to Alps. Prof. and Mrs. Bohr have been in Russia this spring and have had a most interesting time there. At present Landau is here and besides him Placzek, Plesset, Williams, Teller, Proca, Solomon and two young German people of Prof. Franck's pupils. If you see Kimura and Sugiura and other of our friends you will tell them about Christian.

The kindest regards and best wishes for yourself and your family,

Yours sincerely,
Betty Schultz

(*) Also if there should be English families, she is speaking English.

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

TOKYO, 2. Aug. 1934.

Dear Professor and Mrs. Bohr,

I have just been informed by Miss Schultz of the tragic loss of Christian and we are greatly shocked and deeply grieved. It must have been a terrible blow and an unbearable affliction for you to suffer such an irreparable loss. There is no consolation for so great a misfortune and I tell you how much my wife and I as well as all your Japanese friends here feel for you in your great sorrow, which, we know, nothing but time can soften.

Although it is painful for me to open your grief afresh, I cannot help informing you that we have been so much looking forward to having Christian together with both of you in Japan next year. We hope very much indeed that you will not abandon your intention of visiting our country. Probably this journey will divert your mind and bring comfort to you.

My wife as well as all Japanese friends of your Institute join me in sending you our deepest sympathies.

With kindest regards

Yours sincerely
Y. Nishina

P.S. Professor Nagaoka who has recently recovered from his three months' illness is now trying to settle the financial question concerning our invitation of you to this country. As soon as it is made definite, I shall write to you about the matter.

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

TOKYO, 2. Aug. 1934.

Dear Miss Schultz,

I thank you very much indeed for your kind letter of the 5th. July, which gave all of us a great shock and a deep sorrow. I can very well imagine how much Prof. Bohr, Mrs. Bohr and whole the family were plunged into a great affliction and sorrow by the death of Christian, who was one of the nicest boy to my memory. As you know we expected him here with Prof. Bohr and Mrs. Bohr next year. I hope they have not too much suffered from this sad accident.

With regard to your inquiry about a position as a nurse for your friend, I am very sorry to say that it is, as far as I know, nearly impossible to find such a position among Japanese family. I have not heard any person having an European or American nurse. The reason is, I suppose, that the salary for foreigners are very much higher than for Japanese and I think it is almost prohibitively expensive to have such a nurse at least for an average Japanese family. Whether there is any possibility of getting any position for a Danish girl in this country, I shall make inquiry of the Danish Consul here, who must know better than anyone else about such a matter. I shall visit him as soon as I get time and let you know the results, but I expect that the answer will be negative.

I must apologize you for not having written to you for such a long time during which I received your kind letter two or three times. I have recently become more and more occupied with the daily business and I have hardly any time for writing a letter to any of my friends except for a necessary business. Such a state of life is not very interesting. Your kind letter always reminds me of the nice time I spent in Copenhagen and at the same time it keeps me in touch with the present situation at Blegdamsvej. I thank you for this very much indeed and

shall be obliged to you immensely for your doing so in future.

I and my family are getting on quite all right. Our boys, one four years old and the other two, are glowing up rapidly. This summer we have had an unusual weather. For three weeks or more we have seldom seen the sun, it rains very often and is gloomy. One advantage is that the temperature is not so unpleasantly high as usually the case at this time of the year and we can work without much strain.

You wrote to me that Prof. Hevesy will come to Copenhagen with his family. Do they stay for a short time? Please remember me to them.

With kindest remembrances and best wishes from my family and myself

Yours sincerely

Y.Nishina

Please remember me to all our mutual friends in the Institute. I should be much obliged to you, if you would tell any book-shop to send me two copies of Prof. Bohr and Rosenfeld's paper published recently in Copenhagen, a copy of which you have kindly sent to me. I shall pay the expense to the book-shop as soon as I get the copies.

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

TOKYO, 7. Sept., 1934.

Dear Professor Bohr,

Professor Nagaoka who has been arranging the monetary question concerning our invitation of you to Japan has requested me to inform you that you may take the matter as being nearly settled now. We should

like to offer you the sum of twenty thousand yen (a little more than a thousand pounds sterling at the present exchange rate) including your total travelling expenses. As soon as the matter is finally fixed, we shall send you a telegram. We should like very much to know whether you could come over here in the spring or autumn in 1935.

With best wishes and kindest remembrances to your family and yourself

Yours sincerely,
Y. Nishina

P.S. To-morrow I shall leave Tokyo for Sapporo, where I shall give lectures to the university students for about a fortnight. It is in the north-east and takes nearly thirty hours to get there. When I come back, I hope to write to you again.

Universitetets Institut
for Teoretisk Fysik

Blegdamsvej 15, København Ø.
13. September 1934.

Dear Nishina,

My wife and I thank you and Mrs. Nishina for your warm sympathy in our sorrow. We often think of the happy times when you were here and of your great kindness to all the boys. Christian as well as we had been looking forward with so great expectations to our planned visit to Japan next spring. We are thankful for your kind thought that such a journey might be a comfort to us in these sad days, but I am sorry to say that under the present circumstances it will be quite impossible for us this year to leave our home and the other boys, for whom Christian's death, as you will understand, has also been a terrible blow. I might suggest that we come to Japan in the spring of 1937, at what time we would take

Hans, who is now quite a big boy and who will then have finished school, with us. I need not say, how sorry I am that after all the kindness extended to us by you and our other Japanese friends by your so often and so kindly repeated invitation we shall disappoint you again, but I am convinced that you will understand our situation, and I ask you kindly to extend my sincere regret and thanks to Professor Nagaoka.

With our kindest regards and best wishes,

yours ever,

Niels Bohr

Copenhagen, September 14. 1934.

Dear Dr. Nishina,

Professor Bohr has asked me to send you the enclosed speech, which he gave by Christian's funeral. We are all very glad that they have found him, I think it is 3 weeks ago, and Professor Bohr went up to take him home together with Dr. Chiewitz. He was found almost on the same place where he had gone down. They took him home to Carlsberg and there was a quite quiet funeral, where Professor Bohr spoke and a pianist played, and then he was taken to the "Krematorium" and burned.

I thank you very much for your kind letter and for your kind informations about the possibilities for the young Danish girl for going to Japan. Of course we thought there was no great possibility for it, and I ask you kindly to take no more trouble in this matter, please.

You asked for Prof. Hevesy? Yes, he will come with his family and have hired a flat and they are going to live here for some years. Prof. Franck is already here, as I think I have told you. Just in these days

also Weiszacker, Teller, Placzek, Wheeler, Steensholt and Delbruck are here. Klein has been here but has left again. There shall as every year be some discussions here these weeks, but this year it will of course be quiet, no festivities at Carlsberg.

Professor Bohr was very glad for your very kind letter, he also got so kind letters from Kimura and Takamine; he often speaks of you and intends to write to you sometimes, but you know how much here is to do always, therefore it does not happen so often. It is a great pleasure to hear, that you and your family are in good health, I wish I could see the boys, I am sure they are lovely.

Kindest regards and best wishes for you and your family,

Yours sincerely,
Betty Schultz

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

TOKYO, 28. Sept. 1934.

Dear Professor and Mrs. Bohr,

In order to express our affections towards our beloved Christian, we seven Japanese physicists who have stayed in your Institute, send you by a separate parcel post a pair of vases to his memory. We should be very much obliged to you, if you would place them in front of his grave or at any suitable place in its neighbourhood. The inscription is written in Japanese and the translation may read as follows, although it does not express the original meaning exactly. On one of them

"To the Memory of Christian Bohr,

July, 1934."

On the other, the names in Japanese alphabetical order of the seven contributors:

"Shin'ichi Aoyama, Kenjiro Kimura, Yoshikatsu Sugiura,
Toshio Takamine, Yoshio Nishina, Mitsuharu Fukuda,
Takeo Hori."

We hope that some one of us may come to Copenhagen some day, bring some flowers in these vases and renew the cherished memory of those past days on which we played together with dear Christian and other nice boys.

With best wishes and kindest remembrances from us all

Yours sincerely
Y. Nishina

P.S. The parcel will come to you via Indian Ocean and will take at least two months from this date.

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

TOKYO, 28. Sept. 1934.

Dear Miss Schultz,

I thank you very much for your kindness in sending me four copies of Professor Bohr and Dr. Rosenfelds' paper. We can save much time now. If it is necessary to pay for them, please let me know.

I should like to ask you to do another favour for me. To-day we seven Japanese physicists who have stayed in Copenhagen, have sent to Professor Bohr by a separate post a pair of vases to the memory of our beloved Christian. We do not know whether it is necessary to pay the custom duty for such sort of things in Denmark. At all events we should not like that Professor Bohr has to pay the duty and we have tried to send it free from duty or if possible, to pay it beforehand here in Tokyo, but we have not succeeded in either ways and have had to send them as an ordinary parcel post. In case it is necessary to pay the custom duty at Copenhagen, I should be very much obliged to you, if you would be so kind and arrange so that your Institute or some person would pay the duty for us and you would let me know the amount payed, then I should send the sum back to you at once. We thought at first to send some money to you for this purpose but we have no idea about the amount. We have therefore no other way than to ask you to do the above favour for us and I hope that it would not trouble you too much.

The other day I went to see the honorary consul of Denmark here in Tokyo and asked about the position for your friend of whom you wrote to me last time. His wife told me that if your friend is a professional nurse in a hospital, there may be a possibility of finding a position, but since it does not seem from your letter that it is the case with your friend, it is very difficult to get a position here in Japan. She promised me, however, to ask her friends if there is any position for your friend and to let me know the results. At the same time she added that the Scandinavian girls who have sought a position here just as in the case of your friend, have generally not been very satisfied after having been employed, because the relations between the employer and the employee are different from those in Scandinavian countries. If they have a special profession, it is of course quite a different matter. In any case I shall let you know as soon as I receive the answer from the Danish consul, but I am rather pessimistic about the result.

About a week ago we have experienced a terrible storm in the middle part of Japan. It caused a great disaster destroying nearly every thing

in its passage and killing thousands of people. The wind was so strong that an express train was blown down on the railway while passing on the bridge. It was fortunate that the train did not fall into the river, still a number of people was killed. This time Tokyo has escaped from such a great damage. Osaka was the centre of the disaster and we expect that it will take a long time to recover from the suffering.

How did you spend this summer? I hope you are getting on very well. Please remember me to all in the Institute.

With best wishes

Yours sincerely
Y.Nishina

P.S. The parcel post comes to you via Indian Ocean, it will take at least two months from this date.

Universitetets Institut
for Teoretisk Fysik

Blegdamsvej 15, København Ø.
November 30. 1934.

Dear Nishina,

I cannot express, how deeply moved my wife and I are for the great faithfulness you and our other Japanese friends have shown the memory of our beloved Christian by sending us the beautiful memorial vases which we treasure most highly. They arrived just before his birthday on the 25. of November, where we had a little solemnity in our home at Carlsberg in connection with the first distribution of a legacy for the encouragement of a young student or artist, which carries Christian's name and which is founded by his old aunt and schoolmistress, Hanna Adler, whom you will perhaps remember.

On this occasion I tried in a few words to express our deep thankfulness for the testimonies of faithfulness to the memory of Christian, of which the vases from Japan is one of the most touching. They stood with red chrysanthemums under his picture which a close friend of us, a distinguished Danish painter, who has shown Christian great friendship and understanding, has made after his death and which in a wonderful way expresses the deep earnest which in spite of his youth was characteristic for his whole attitude to life.

This picture hangs in my study at Carlsberg, and we think that this place, as long as his mother and I are alive, may perhaps also be the best place for the memorial vases, as Christian in our lifetime has found a resting place in the grave of my father, after whom he was named, and we are not sure that there on this grave can be found a place quite fitted for the beautiful vases. Where they stand now, they will every day remind us of all the kindness you and our other Japanese friends showed Christian in his life and the faithfulness you showed him after his death.

We ask you kindly to extend our deepfelt thanks to all the friends who have contributed to this most treasured gift. We will soon write to you all again and send copies of the memorial words and of the pictures of Christian. We also hope very much that you and other of our friends will visit us again, and we are ourselves looking forward to visit your country which has for many years taken so great parts in our thoughts. It was with the greatest regret that we had to postpone this visit still further, but we hope that you will understand that we felt it impossible for us to leave the other children under these sad circumstances.

With our kindest remembrances and heartiest wishes to you all,

Yours ever,

Niels Bohr

Julen 1934

Dear Dr. Nishina!

I send you the best wishes for Christmas and the new year for you and your whole family. I ought to have written you a real letter already long ago in reply to your last kind letter, but I shall do so soon. Only I must tell you that the beautiful vases you sent Prof. Bohr, came through without our paying any duty at all. Otherwise I should of course have paid it and written about it to you, as you asked me to do. But this was the very easiest. They are beautiful and Prof. Bohrs were much touched to get them and appreciate them very much.

Kindest regards and the best wishes for a happy new year

Yours

Betty Schultz

GL. CARLSBERG

VALBY

Feb. 26 1935

Dear Dr. Nishina,

I send you herewith some copies of a memorial paper about our beloved Christian. The first part of it is the farewell, which my husband said to Christian from us all, when he was carried away from home, after having been brought to us from Sweden. The second part countains some words, which my husband said on Christian's birthday, when the legacy, which Miss Adler has given to his memory, was given away for the first time. The four portraits are reproductions after two beautiful paintings, which Julius Paulsen and William Scharff have made

to us, they are both near friends of us and were both so fond of Christian. The pictures are very like him, but the one of Paulsen has lost more in reproduction than the one of Scharff. Your two beautiful vases are standing under the pictures of Scharff in my husband's study, at present with a branch of a spiny bush in them. I never look deeply touched by the faithfulness and affection, which you have shown to Christian and us in this beautiful way. It has been a very sad year for us, and we have been so sorry, that we had to give up our journey to Japan this spring, but I think you will understand that it would be too difficult for us to leave all the children alone under these sad circumstances and too sad for us to begin this journey alone, we had been planning it and talking so much about it with Christian. I hope to be able to come with my husband and Hans, when they go in spring 1937, it would be a great pleasure to see all our friends again and a wonderful experience in our life to see your beautiful country. We have just had a letter from Professor Langevin telling us about the wonderful time he had in Japan. My husband has not been feeling quite well this winter, the deep sorrow besides all his work, has been too much for him. He felt he had to take a holiday and is at present in Arosa together with Hevesy, from there he goes to Bayern to spend some days skiing with Heisenberg in the Bavarian Alps. Hans is also going there, he left yesterday morning to meet my husband in Munchen; it is Hans' first journey outside Scandinavia, he was very excited and happy. I hope that you are some day coming over here again, all your friends would be so happy to see you and you must bring your wife too. Will you be so kind and forward the other papers, I am so sorry to trouble you but I have not got the address.

With the best wishes to you and your family and heartiest greetings,

Yours very sincerely,
Margrethe Bohr

Copenhagen, 2/3 1935

Dear Dr. Nishina!

As Mrs. Bohr has told you in the enclosed letter, she sends copies of the speech Prof. Bohr made by Christian's funeral to you and the other friends in Japan. They are sent by the same post as printed matter and Mrs. Bohr asks you to be kind enough to give them to the other gentlemen. Prof. Bohr himself is at present in Germany, snow-skating together with Heisenberg, so I have enjoyed a quiet time the last fortnight. I hope you and your family are in good health and send you the kindest regards

Yours sincerely
Betty Schultz

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

TOKYO, Jan. 8th. 1936.

Dear Professor and Mrs. Bohr,

I am very sorry that I have not answered to any of your letters, which I have received in connexion with our beloved Christian during past one year with much sorrow, sympathy and gratitude. The accumulation of every day task in our Institute prevents me from writing any letters except those for urgent matters. It is a very sad condition which, however, I am unable to change at present.

The copy of Professor Bohr's memorial speeches on two different occasions of Christian, which Mrs. Bohr very kindly sent to us all, gave us a vivid picture of Christian himself, his family and surroundings. I

was very much moved by reading it. Your very kind words on us Japanese friends cannot be read without a deep gratitude. I shall keep the copy forever in order to cherish the dear memory of our beloved Christian.

About three weeks ago, we seven Japanese physicists who stayed in your Institute sent by parcel post a small ivory carving of a little chicken coming out of an egg. This is to express our sincere congratulations on your fiftieth birthday. It is very late to send our wishes at this time. This has been caused among other different circumstances by a great distance, which prevents us from obtaining up-to-date informations of happenings in Copenhagen. I hope you will excuse us for this unduly delay.

As regards the carving we meant it for the occasion, because it expresses birth and it also symbolizes your entering into the new stage of your life. With this small token we send you our heartiest wishes for your health, prosperity and success in your future work as ever.

The inscription written in Japanese on the back of the stand may roughly be translated as follows,

"For the Celebration of Fiftieth Birthday,
To Professor Bohr,
October 7th., 1935,
From Shin'ichi Aoyama, Kenjiro Kimura,
Yoshikatsu Sugiura, Toshio Takamine,
Yoshio Nishina, Mitsuharu Fukuda
and Takeo Hori."

The names of the contributors are given in Japanese alphabetical order.

We are all looking forward to welcoming both of you and Hans here in the spring of 1937 and hope that nothing will this time come in the way of the realisation of your long planned journey.

With kindest regards and best wishes to yourself and your family
from my wife and myself,

Yours ever

Y.Nishina

Universitetets Institut
for Teoretisk Fysik

Blegdamsvej 15 København Ø
February 8th 1936.

Dear Nishina,

I can hardly say, how great a pleasure you and our other Japanese friends have given me by the most beautiful gift to my 50th birthday, and how touched my wife and I were for your most friendly and sympathetic letter. The ivory chicken stands by itself on a little cupboard in the same room where the bronze vases stand under the painting of Christian, reproduced at the end of the little memorial pamphlet we sent you last year, and which daily remind us of your faithful friendship. The chicken is most admired by everybody, and I appreciate myself also very much its fine symbolic meaning.

My wife and I look forward very much to come to Japan next year to meet you all again and see ourselves your country, which in our thoughts has always been surrounded with so much romance and beauty, and for Hans too it will be a most wonderful adventure; he has developed into a big boy now, of whom we have already great support in many ways. When he has finished his school this summer, he will at any rate for the first year specialize in atomic physics and will surely be a great help to me also in preparing the lectures which I shall be giving in Japan.

Just in this moment my wife and I are leaving for England for a few weeks, where I shall speak in London about some new ideas regarding the

constitution of atomic nuclei which I have developed in the last months. As soon as I come back I shall write and tell more about it and also about the more detailed program for my lectures in Japan. To-day I wanted only to express my most hearty thanks to you and our other Japanese friends and to send you all the kindest greetings and best wishes from my wife and myself.

Yours ever,
Niels Bohr

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

TOKYO, April 23. 1936.

Dear Professor Bohr,

I thank you very much indeed for your kind letter of the 8th. February, which I received a long time ago. Meantime your paper on the constitution of atomic nuclei, which you mentioned in your last letter appeared in Nature and had a great influence on our view towards the nuclear phenomena. In my opinion your new theory brought us much nearer to the solution of the nuclear problems than previous views, although the theoretical treatment has become very difficult. I wonder how theoretical physicists are going to attack the problem. I am looking forward to the joint paper of you and Kalckar, as was mentioned in your paper. I should like also to know about the later development of your view.

As regards the program of your journey to Japan and of lectures to be given next year, I should like to have your rough suggestion as the basis of our considerations, because all depends on about how many lectures you would like to give us and how long you would like to stay

in this country. As I often wrote to you, we should like of course to have you here as long as possible. The sum of twenty thousand yen including your total travelling expenses, which Professor Nagaoka arranged to offer you in September 1934 is not changed, as I understand.

I hope that you would be able this time to realize this long planned journey and we are all looking forward very much to seeing Mrs. Bohr, Hans and yourself here in Tokyo.

With best wishes to you and your family from my wife and myself.

Yours ever,
Y.Nishina

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

TOKYO, August 3, 1936.

Dear Professor Bohr,

I thank you very much indeed for your kind and interesting letter of the 2nd. July, which gave us a great pleasure by informing us of the visit to this country of yourself, Mrs. Bohr and Hans in April next. I am really pleased to hear that you are going to realise your long planned journey. We are all looking forward to seeing you and your family here in Tokyo, and listening to your lectures and discussions, out of which we expect to profit very much.

I have told your intention to Professor Nagaoka and he is going to arrange the monetary matter. As I understand, Professor Nagaoka is trying to get the fund from Mitsui and Mitsubishi, the two richest families in this country. He thinks that the matter will soon be

settled anyhow. I advise you therefore to proceed with your preparations for the journey under the assumption that the monetary question has already been settled as mentioned in my previous letter.

I see from your letter that the Conference held in your Institute last June must have been very interesting indeed. I saw its short report in Nature and I can imagine that there has been a great deal of fruitful discussions. We are far away from centres of such discussions and we hope to learn very much from you on such questions when you come here.

I thank you for the reprints of your two papers, both of which we discussed very much in our laboratory, when they came out. There were, however, some points which we could not understand very well. You will probably tell us about them when you come here next year.

In my laboratory we have not done much recently either theoretically or experimentally. At present I am much occupied with the construction of a cyclotron and a high tension installation as well as buildings for housing them. We hope to start the cyclotron at the end of October. The magnet, however, is 66 cm in diameter and 14,000 gauss in field strength and is not large enough. We are therefore now trying to get a fund for constructing a larger magnet. It is very interesting to see from your letter that you are also constructing a cyclotron as well as a high tension installation.

I should like in this connexion to ask you one question. In our laboratory we have been discussing very much whether we should build a high tension source or not. The high tension which we can obtain by means of the Cockcroft method is 1 to 2 million volts or 3 millions at the highest as will be done at Cambridge. The energy obtained by such an installation is thus much less than that obtained by a cyclotron of say 66 cm in diameter and 17,000 gauss in field strength. Some of us therefore maintain that we should abandon the construction of the high tension source and use the money instead for the magnet of the cyclotron

to be built and increase its diameter, that will be more useful. Some of us, however, contend on different grounds that we should construct the high tension source of the Cockcroft type. The settlement of this matter is very urgent in our case.

Now I see from your letter that you are going to build a cyclotron as well as a high tension source. I should like very much to know for what purpose you are going to use the high tension source besides cyclotron. I know that you have not time for informing me of this matter and I should be very much obliged to you, if you would let somebody of your laboratory answer to my question. It would help us very much in solving our urgent problem.

I shall stop here for to-day. If you want to know anything about your journey to Japan, please do not hesitate to let me know. I shall do what I can.

With best wishes and kindest regards to your family and yourself from my wife and myself,

Yours ever

Y.Nishina

P.S. In connexion with your visit to this country, I expect that we shall want your short biography on different occasions. I should be much obliged to you, if you would let me know where to find it.

Universitetets Institut
for Teoretisk Fysik

Blegdamsvej 15 København Ø
January 16th 1937

Dear Dr. Nishina,

Mrs. Bohr told me that you wanted some information of Prof. Bohr, before his arrives at Japan. As we did not exactly know what informations you wished, we send you enclosed an article, published in a Danish biographical dictionary, hoping that you will still remember so much of Danish language, that you can find the wanted informations from this article.

I hope that you and your family are in good health and send you the kindest regards.

Yours sincerely,
Betty Schultz

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

TOKYO, Feb. 15, 1937.

Dear Miss Schultz,

I thank you very much indeed for the biographical note of Professor Bohr, which you very kindly sent to me. We want it in order to give informations to some authorities concerning Professor Bohr's career.

We are all looking forward to seeing Professor and Mrs. Bohr as well as Hans, whom we expect here to arrive on the 15th. April. They will bring us various news from Copenhagen.

I am very sorry that I have not written to you for so long a time. For recent years I have been so busy everyday that I cannot write letters except for inevitable things. This is a very deplorable state of things but I cannot change it at present.

How are you getting on? In the absence of Professor Bohr, have you much time for yourself? Please let me hear from you now and then when you have time.

With best regards and kindest remembrances

Yours sincerely
Y.Nishina

Post card

On board of Shanghai-maru NYK.
May 20th. 1937

Dear Nishina

Our minds and our hearts are so full of the wonderful days in Japan and the thoughts of our faithful Japanese friends, that I shall not try to express our feelings and our thanks in any such short way. I want only to say that we feel that we are still in your remindful and brotherly care—as your kind telegram so effectfully proved—and that I therefore felt that I must tell you that we have had a nice sea journey and already are in sight of the Chinese coast.

With kindest regards and heartiest wishes to you all,

yours ever
Niels Bohr

20-5-37.

Dear Nishina

Our minds and our hearts are so full of the wonderful days in Japan and the thoughts of our faithful Japanese friends, that I shall not try to express our feelings and our thanks in any such short way. I want only to say that we feel that we are still in your reminded and brotherly care - as your kind telegram has effectively proved - and that I therefore feel that I must tell you that we have had a nice summer and already are in sight of the autumn coast. Will kindly regard



Dr. Y. Nishina

Institute for
phys. and Chem. Research

Komagome St.

Hongo

Tokyo

Japan.

August 17, 1948

Professor Niels Bohr
Institute for Advanced Study
University of Princeton
Princeton, N. J.
U. S. A.

Dear Professor Bohr:

As I heard that you are now staying at Princeton and Dr. Yukawa is coming to the Institute for Advanced Study, I avail myself of this opportunity for writing this letter to you.

It is really a long time since I wrote to you last. Do you remember we saw you off at Nagasaki? A good deal has happened during these 10 years. How is your family?

Japan is not the same Japan which you saw in 1937. The trouble began in Manchuria just after you had passed through that country. Since then everything went in the wrong direction and at last we are here in a devastated town in which poverty prevails all over.

At the direction of GHQ here our Institute was reorganized into a private concern in March last. I became the President and has to run the Institutute, the administration of which is not an easy matter at this time of national hardship. The most difficult thing is to finance the Institute to which I have to concentrate my energy. I gave up physics at least for some time to come and became an administrator and a business man. One cannot do what he wants to do. The present objective of our Institute is the application of science to peaceful industry in

order to promote the rehabilitation of general economy of this country, in which the poverty paralyses its whole machinery. 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.

I wish you and your family a good health and a good luck. Please send my best regards to Mrs. Bohr.

With best personal wishes,

Yours Very Cordially,
Y. Nishina

Scientific Research
Institute, Ltd.,
Komagome Bunkyo-ku, Tokyo

Universitetets Institut
for Teoretisk Fysik

Blegdamsvej 15, Copenhagen
December 9, 1948.

Dear Nishina,

I was very happy and moved to receive your letter which Yukawa forwarded to me from Princeton and I need not say that the whole family as well as your many old friends in the Institute were deeply interested in having news from you.

My wife, Hans and I will never forget the days at Nagasaki where we took leave from you and our other friends after the wonderful time we had spent in Japan and which the faithful friendship of you all made not only so pleasant, but also so enlightening an experience to us. Surely, the troubles which already then caused you anxieties should soon change

everything, but we must now all look to the future and each in his own way strive for a more hopeful development. In spite of all present divergencies I feel that the great and terrible lessons which all mankind have received cannot fail in urging such a cooperation between all nations on which not only prosperity but the very survival of civilization depend.

I feel sure that you will be able in a most effective manner to assist in the recovery and stabilization of your country and that within few years you can again continue the scientific researches with which you and your group have had so great success. In Princeton, where my wife and Aage and I stayed last spring, all the Institute learned with great admiration about the advances in the development of quantum electrodynamics, which were made in Japan even in the times of greatest difficulties and I just heard from Oppenheimer how happy they are for the collaboration with Yukawa.

Here, we all are very busy with an extension of the Institute which will allow us to widen the field of our present experimental researches, although there is of course no question that we can extend these to the fields in which in U.S.A. with such extraordinary resources new and most promising advances are being made. We hope, however, to be able again to establish a smaller center for international cooperation in physics and we have already had a number of visitors from other countries.

The reorganization of the Institute should be finished at the end of the coming year and, in the beginning of 1950, we plan to have a meeting where we hope to see as many as possible of the old friends who worked here in earlier and more recent times. Especially we should be able to dispose of means to cover your travelling expenses. As soon as such arrangements are made I shall send you a formal invitation.

I can hardly say what a pleasure it would be to the whole family and your many friends in Copenhagen to see you here again and how much I myself will look forward to being able to talk with you about old days

and the new prospects in physics and not least about the general human problems which are so deeply on the mind of us both.

My wife joins me in sending our heartiest greetings and warmest wishes to yourself and all our Japanese friends.

Yours ever,
Niels Bohr

Professor Niels Bohr
Universitetets Institut for Teoretisk Fysik
Blegdamsvej 15
Copenhagen, Denmark

August 19, 1949

Dear Bohr:

I received your kind and interesting letter of December 9, 1948, to which I am very sorry not to have answered owing to my negligence. The administration businesses of our Institute, of the Science Council of Japan, and of a number of governmental as well as private committees absorb whole my time.

Now I am very pleased to tell you that I am coming to Copenhagen in order to attend the meeting of International Council of Scientific Unions, as a delegate representing the Science Council of Japan, of which I am one of the Vice-Presidents. I leave here on September 8 and shall probably arrive in Copenhagen on September 13 via London. After attending the meeting I shall leave Copenhagen on September 22. It is a very short stay but owing to the administration of my Institute I cannot stay longer. It is the first time after the war that Japan sends an official delegate to such an international conference. I am looking forward to seeing you and your family and all my old friends as well as

international figures in science.

I heard that my invitation was initiated by you and Fraser in Paris. The Occupation Authority here in Tokyo received a letter of enquiry from Dr. Stratton, asking whether a delegate can be sent from Japan and adding that they will explore the possibility of defraying the cost of the travel. The GHQ authority replied in the affirmative about 4 weeks ago on the condition that my travel expense be paid by ICSU, but they have not heard anything from Stratton.

Meanwhile there are a lot of procedures for me to take in order to go abroad. These preparations are being now made and the GHQ will send me to Copenhagen in any way. This is the story how my visit to old Copenhagen is going to be realized.

It is already 21 years since I left Copenhagen and I should be very pleased to be able to talk to my old friends.

With best wishes to your family and yourself,

Yours ever,
Y. Nishina

Professor Niels Bohr
Universitetets Institut for Theoretisk Fysik
Blegdamsvej 15
Copenhagen, Denmark

August 26, 1949

Dear Bohr:

I should like just to tell you that Dr. Stratton wired to GHQ here in Tokyo informing the impossibility of finding any external financial

aid for my travel. Meanwhile, however, GHQ decided to bear the expense and I shall leave Tokyo on September 8 arriving in Copenhagen on September 13 via London by B.O.A.C. plane as I wrote to you in my previous letter.

At present I expect to leave Copenhagen on September 22 but there may be a change in the schedule of plane route and also I may have to attend the General Assembly of UNESCO to be held from September 19. In that case I have to leave Copenhagen earlier.

Looking forward to seeing you again,

Yours ever,
Y. Nishina

Professor and Mrs. Niels Bohr
Gl. Carlsberg
Copenhagen, Denmark

October 8, 1949

Dear Professor and Mrs. Bohr:

It is just a week since I came home from my long journey, the recollection of which gives me much delight, consolation and encouragement. I was very, very glad to see you and your family again, which I had never expected during the war to be possible and which I had always wished to do since the end of the war. It was especially a great joy for me to see both of you are very well and have changed very little after such strenuous years. When I was talking with you at your home, you always gave me an illusion that I had been at your home at Blegdamsvej, forgetting the lapse of 21 years. At the same time, your boys who have splendidly grown up and been doing very well and your beautiful mansion and extensive gardens brought me back to the reality

and made me think a great deal on what have happened during the interval of these two decades.

It was very kind of you to have done for me to make me happy and pleasant in all possible ways for which I cannot be too thankful. The talk with both of you gave me a great encouragement. The shopping on Saturday is a happy remembrance. Those things are great contributions to the living of my family.

Since I have been taken up by the General Meeting of the Science Council of Japan, which lasted full four days, I have not yet been able to see our Japanese friends, to whom you were very kind to give beautiful presents. My wife was very, very pleased to have those nice things and asked me to send you many, many thanks. In a few days I shall see all of our friends in Tokyo and talk about you and your home. I am sure they will all be very pleased.

At the General Meeting of the Science Council of Japan, I made a report on the Copenhagen Meeting of ICSU. They were very pleased at the return of our country to a member of the international cooperation in scientific world. Our future contribution to such cooperation depends on the effort of our scientists in respective fields. This has given a bright hope and encouragement to Japanese men of science.

At your kind seeing me off, I left Copenhagen Monday morning, September 19 and arrived in Paris the afternoon. I stayed with Frasers, whom I got to know at Hamburg in 1927 - 1928. I visited the General Assembly of UNESCO, which started on the same day and in which I had an interest, because I am President of the Federation of UNESCO Cooperative Associations in Japan, although Japan is not admitted yet as a member of the organization. I stayed two days in Paris and flew to London Wednesday (September 21) and saw Dr. Stratton at Royal Empire Society.

On account of the delay in obtaining passport visas of Iraque, Siam and India, I lost my seat in the British Overseas Airways Corporation

plane which left London Friday morning(September 23). I had to change the plane from BOAC to PAA(Pan American World Airways) in order to arrive in Tokyo as early as possible. I succeeded to obtain a seat in the plane which left London Monday(Sept.26),but the reservation was only up to Calcutta beyond which it was not possible at London to get confirmation because of shortage of time. In spite of this uncertainty I left London Monday evening and arrived at Calcutta Wednesday(Sept.28) morning and could reserve a seat as far as Hongkong beyond which there was again too little time to ascertain.

On leaving Calcutta Thursday night(Sept.29) I arrived at Hongkong Friday afternoon(Sept.30) and found that I could keep my seat up to Tokyo, where I arrived Saturday morning(Oct. 1). At Hongkong, while we stayed for three hours at air port, my bag disappeared from the cabin. The bag contained the beautiful elephant you gave me and I was very,very sorry. But several days afterwards they found the bag in the lobby of a Hongkong hotel and was safely returned to me in Tokyo. This might have been due to the lucky elephant in the bag but I do not still understand how the bag crossed the Hongkong custom barrier.

In London I saw the news of the Russian atomic bomb, which aroused a great excitement. In Tokyo people talk much about it. I hope an effective method of international control of atomic energy will soon be established. A resolution for its request was passed by the General Meeting of the Science Council of Japan.

On my ways to and from Copenhagen, I had a chance of observing various civilizations and standards of living, which are closely connected with economies of respective communities, one of the most important international problems. It seems to me that the solution of this difficult question demands a close international cooperation based on scientific investigations of natural resources, industries, population, traditions and histories of all localities. This is a very hard task but it has got to be done sooner or later, if mankind want to have a rational existence.

Please send my remembrances to Hans, Erik, Ernest and their family. I had no time at Paris to call up Erik, to whom I should like to write soon.

With best thanks and warmest wishes,

Yours ever,

Y. Nishina

Y. Nishina's Correspondence with N. Bohr and Copenhageners

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