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Physics Department
Kyoto University
Kyoto, Japan
Nov. 7, 1947.

Dear Professor Oppenheimer:

I was very much delighted to have received your letter so soon.
I accept with hearty thanks your kind invitation to your Institute, I
which is now a world centre of the study of theoretical physics. I
am not sure for the time being as to the approval of SCAP (Supreme
Commander of Allied Powers) in Tokyo, which will depend to a great
extent on the progress of the peace treaty, but it will certainly very
effective, if you will kindly send an official letter of invitation
through relevant section of SCAP. I want to start on the journey, if
permitted, towards the end of August or the beginning of September 1948
in order to be in time for the first semester.

As you noticed, recent experiments concerning the decay of the
negative mesons on the one hand and the works of Occhialini, Powell and
others on the other hand seem to reveal the plurality of the socalled
"mesons". Our previous idea was certainly too simple to afford the
complexity of phenomena, which were disclosed afterwards in succession.
In this connection it is of some interest that Sakata and Inoue proposed
a few years ago a hypothesis, in which two kinds of mesons were considered,
one with the spin 1/2 and the other with the spin 0 or 1, in order to
get rid of the difficulties relating the scattering and life-time of
mesons. They assume namely that the mesons in cosmic rays have spin 1/2
and do not interact directly with the nucleon, whereas the mesons of
integer spin interact with the mesons of spin 1/2 as well as with the
nucleons and the electron-neutrinos. I cannot guess of course the details
of your recent work, but I feel that it may bear some resemblance to the
above hypothesis. At any rate it may well be that the whole problem will
be solved by a suitable combination of the ordinary meson theory with the
extended meson-pair theory postulating, as suggested by Weisskopf, the
existence of the neutral meson with the mass a little less than that of
the charged meson.

As the experimental researches in Japan today are meagre owing to
economics difficulties among other reasons, our theoretical investigation
depends entirely on the results obtained in other countries, especially
in your country. So we shall be very much obliged, if you and your col-
leagues will be so kind to stimulate us by informing occasionally of the
progress in theory and experiment concerning the nature of elementary
particles.

Hoping that we shall be able to meet again in autumn next year in
Princeton, I am always

Yours very sincerely,

Hideki Yukawa

P.S. I am very grieved to hear the sudden death of Dr. Kusaka who was
one of your able pupils.

Physics Department,
Kyoto University,
Kyoto, Japan,
Nov. 6, 1947.

I was very much delighted to have received your letter so soon.

I accept your kind invitation to your institute, which is now a world centre of theoretical physics, with hearty thanks. I am not sure for the time being as to the approval of SCAP (Supreme Commander of Allied Powers) in Tokyo, which will depend to a great extent on the progress of the peace treaty, but it will be very effective, if you will kindly send an official letter of invitation through relevant section of SCAP. I want to start on the journey towards the end of August 1948 in order (or the beginning of September) to be in time for the first semester, if permitted.

As you noticed, recent experiments concerning the decay of negative mesons on the one hand and the works of Occhialini, Powell and others on the other hand seem to reveal the plurality of the socalled "mesons".

Our previous idea was certainly too simple to afford the complexity of phenomena, which were disclosed afterwards in succession. In this connection it is of some interest that Sakata and Inoue proposed a few years ago a hypothesis, in which two kinds of mesons were considered, one with the spin 1/2 and the other with the spin 0 or 1, in order to get rid of the difficulties concerning the scattering and lif-time of mesons. They assume namely that the mesons in cosmic rays have spin 1/2, which do not interact directoly with the nucleon, whereas the mesons of integer spin interact with the mesons of spin 1/2 as well as with the nucleons and the electron-neutrinos, as shown in the following scheme. I cannot guess of course the details of your recent work, but I feel that it may bear some
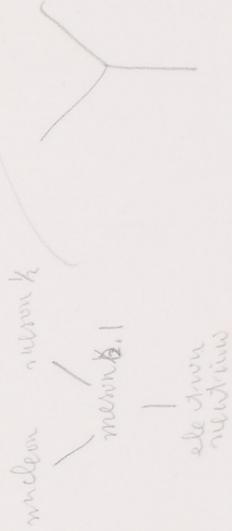
resemblance to the above hypothesis. At any rate it seems probable

that the whole problem will be solved by a suitable combination of the

ordinary meson theory and the extended meson pair theory postulating,

as suggested by Weisskopf, the existence of the neutral meson with the

mass a little less than that of the charged meson.

As the experimental researches in Japan today are meagre owing to

economic difficulties among other reasons, our theoretical research

depends entirely on the results obtained in your country. So we shall

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occasionally of the progress in theory and experiment concerning the

nature of elementary particles.

Hoping that we shall be able to meet again in next autumn in Princeton,

I amm

Yours very truly

H. Yukawa