Rowstock 377 Ext: 7

24th May, 1960.

Professor J. M. Cassels, Laboratory of Nuclear Studies, Cornell University, Ithaca, New York, U.S.A.

Dear Jimmy,

Thank you for your letter of 16th May. You will have heard from Sir John that the next step is to contrast the experimental possibilities of the synchrotron and the linear accelerator. The paper is being redrafted, in the light of comments at the Physics Committee, for submission to the Institute Board in a few weeks' time. Some of the detail (e.g. the table on expenditure by years) will be cut out, and a firm request will be made for a design study of the electron machine. You will receive a copy of the redraft soon for comment.

Thank you for pointing out a specific advantage of going to 3 GeV at least.

Although the 12 GeV machine was not mentioned in the paper, I raised the matter at the meeting and repeated the comments you made in your previous letter. Mullett made a number of points about tight tolerances and cost (which would exceed that of the CERN machine) - he was not ready with a written appraisal but he is now completing this and will send you a copy. The feeling of the meeting was that to go for this machine would remove from the programme, for the foreseeable future, not only the smaller electron machine but also the high intensity proton machine. It will, therefore, be omitted from the redraft also.

I was disappointed at the meeting that no one commented usefully on the figures we gave for university staff and students who would use the machines. We guessed these figures, in an attempt to provoke comment from the universities. I believe that these considerations are the most important of all. We hope to include in the redraft the numbers of research people at present involved in D.S.I.R.—supported nuclear research.

Best wishes,

Yours,