Phys Comm working party

Reference ....

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As I shall not be attending the future accelerator meeting in Liverpool I would like to record my personal views which you may care to consider.

I feel that future accelerator construction in Britain should follow on three lines. The first and in my opinion the most important is - An alternating gradient machine. The use of this principle for large accelerators is now well established and it would be silly to think that its development has reached finality in the CERN machine. It may well only be the first stage. We should therefore get experience in A.G. machines in this country as soon as possible. The particle and energy can be decided on nuclear physics grounds but after discussion with Bill Walkinshaw there would seem to be a good case for 12-15 GeV protons at 10 x 20 times the beam current at CERN (for this energy).

The second line is to back Glasgow with their positron work. Here I would support giving them approval to build the conversion stage which I believe would be a very good investment even if positron-wise it is unsuccessful. If however, they show that a sufficiently high current of positrons can be accepted for subsequent acceleration then I think a multi GeV positron-cum-electron project should follow.

Finally I feel that the best bet for high current intermediate proton energies is the extension to the P.L.A. It could be that studies on 400 Mc/s here would lead to radically new ideas on high energy P.L.As but the step to build a GeV P.L.A. from scratch is not one that I think we can take for the next two or three years.

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Building 470.1
15th March, 1960

c.c. Mr. L. B. Mullett
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