

7th February, 1958.

N.I. (58) 1st Meeting

NATIONAL INSTITUTE FOR RESEARCH IN NUCLEAR SCIENCE

GOVERNING BOARD

Minutes of the Meeting of the Governing Board held in Room 196, Treasury Buildings, Whitehall, at 2.30 p.m. on Tuesday, 28th January, 1958.

Present:-

Lord Bridges (In the chair)

Sir John Cockcroft	Professor R.E. Peierls
Professor J. Diamond	Dr. B.F.J. Schonland
Mr. J. Gridley	Sir George Thomson
Professor W.V.D. Hodge	Professor D.H. Wilkinson
Sir Philip Morris	Dr. T.G. Pickavance
Professor N.F. Mott	Mr. P.J. Searby
Sir James Mountford	

Dr. J.A.V. Willis (Secretary)

Before opening the meeting Lord Bridges welcomed Professor Hodge who had succeeded Sir David Brunt as Physical Secretary of the Royal Society and as a member of the Board. He also welcomed Dr. Pickavance who had been appointed Director of the Rutherford High Energy Laboratory and Dr. Willis who had been appointed Secretary.

1. APOLOGIES FOR ABSENCE

Apologies for absence were received from Professor Blackett, Professor Massey, Dr. Melville and Sir Donald Perrott.

2. MINUTES OF LAST MEETING

The Board approved the minutes of their fifth meeting.

3. DRAFT ROYAL CHARTER

The Secretary reported that the Treasury Solicitor had prepared a new draft incorporating the amendments requested by the Governing Board at the last meeting. The draft was at present with the Privy Council Office where technical points concerning the disqualifications of members of the House of Commons were being considered.

With regard to the question whether the Institute should be singular or plural the Board expressed a preference for the singular provided that the choice was open to them from a legal point of view.

4. VISITING COMMITTEES

The Board had before them a report by the Physics Committee, N.I. (58)2, recommending that for the immediate future a single visiting committee should be formed to discuss the experimental programme for the linear accelerator and the needs for the future experimental use of the proton synchrotron. In discussion of this paper it was agreed that a

representative of the Atomic Energy Authority should be added to the list of membership.

Sir John Cockcroft drew attention to the suggestion in the paper that a two-tier structure would eventually be needed. He thought that when the machines were working the more junior executive and scheduling committee would have to be added.

The point was made that although the Agenda would be so arranged that members could attend for either or both machine it would be advantageous if some members attended for both and they should be encouraged to do so.

The Board:

- (1) Accepted the recommendation of the Physics Committee that for the immediate future a single visiting committee should be formed to discuss the experimental programme for the linear accelerator and the needs for the future experimental use of the proton synchrotron.
- (2) Decided that the Committee should be established for two years initially.
- (3) Endorsed the proposed initial membership i.e. Professor Massey (to be invited to be Chairman) Professor Wilkinson, Professor Devons, Professor Burcham, a member to be nominated by Cambridge,* Professor Skinner, Professor Cassels, Professor Butler, Professor Peierls, Professor Moon, Professor Powell, a member to be nominated by Glasgow, and a representative of the Atomic Energy Authority, and agreed that Dr Stafford should act as Secretary.
- (4) Recorded the view that the membership should not be regarded as rigid but that a certain degree of change would be healthy.

5. REPORT ON PROGRESS OF THE 7 GeV ACCELERATOR

Dr. Pickavance gave a progress report in which the outstanding items were the following:-

Magnet: The design of the blocks has been finalized and Messrs. Sankey's contract has been amended with the approval of the General Purposes Committee. The first 150 tons of steel has been delivered by the Steel Company of Wales to Messrs. Sankey and appears to be satisfactory.

Magnet coils: The details of the design specification are now being worked out. This is a difficult part of the design and was the cause of a major breakdown of the Brookhaven Cosmotron. Three men are being sent to Brookhaven to draw on the experience resulting from this breakdown.

Magnet Power Supply: This will probably be the next very large contract to be placed. Quotations are expected from Brown Boveri and from B.T.H. for the whole equipment while some other firms may tender for parts. The project Committee may be ready to make a recommendation by about the end of February.

Main Vacuum Vessel: This requires to be manufactured to engineering tolerances in a special resin-glass laminate. It is unlikely that competitive tender or fixed price quotations will be obtained. The value of the contract will probably be about £100,000 to £150,000.

* NOTE

Professor Mott has since nominated Professor O.R. Frisch to represent Cambridge.

Building Work: Messrs. Chivers have now been working for about two months on the contract under the very tight programme set to them. They are at present about two weeks behind schedule but the A.E.A. Industrial Group progressing organization has now made itself felt and it is hoped that the lost time will be regained.

The Chairman said that it appeared that good progress was being made against the very tight programme and he congratulated Dr. Pickavance.

6. PROPOSALS FOR THE TRANSFER OF THE PROTON LINEAR ACCELERATOR

The Board had before them a paper by the U.K.A.E.A., N.I.(58)1. Dr. Schonland said that this paper had been endorsed by the Authority. Referring to the estimated annual running cost of £211,000 he pointed out that this figure includes a sum of £75,000 for depreciation which would not involve cash expenditure. The estimated annual grant required by the Institute in connection with the proton linear accelerator was therefore about £130,000 to £140,000. In discussion it was pointed out that this sum does not include the salaries of University staff who may make use of the machine nor the cost of their own equipment. Some discussion followed on the question whether the cost of the equipment could be met through the Institute. It was concluded that at present the correct course is for the University to obtain the money through the University Grants Committee or the D.S.I.R., Professor Wilkinson said that he was already finding difficulty in obtaining money from the D.S.I.R. for this work. In order to clarify the matter for further discussion, Dr. Pickavance was asked to write a paper for the next meeting giving a set of rules from which it could be clearly seen in each case what research expenses the Institute would meet and what expenses remained for the Universities.

With regard to the date of transfer it was generally agreed that it would be convenient to defer this to the end of the financial year. Experimental use by Universities need not however wait till then and Dr. Pickavance said that he still expected that the machine would be ready for experimental use by the end of 1958. University teams would be able to come and start making their plans somewhat before then.

The Board:

- (5) Gave general approval to the proposals in paper N.I.(58)1 and agreed to accept the transfer of the proton linear accelerator on 1/4/59.

7. APPOINTMENT OF A GROUP LEADER FOR THE PROTON LINEAR ACCELERATOR

The Board had before them a proposal from Dr. Pickavance for the appointment of Dr. G.H.Stafford (Paper N.I. (58). 3) With regard to the period of the appointment Dr. Pickavance proposed a period of three years.

The Board:

- (6) Endorsed the recommendation of Dr. Stafford and invited the Atomic Energy Authority to second Dr. Stafford for duty with the National Institute as Group Leader for the proton linear accelerator for a period of three years from 1st February 1958.

8. ANNUAL ESTIMATES

The Board had before them a note by the Secretary N.I. (58) 4 setting out the estimate for 1958-59 which had been prepared by the Atomic Energy Authority. The secretary apologised for an error in the figures due to incorrect adjustment of the cost of the A.E.A. Industrial Group team working on the proton synchrotron. The figures should be as follows:-

£000

Estimates
1958/59

(1957/58)

B.7

Recurrent expenditure

Salaries, etc	10	(2)
A.E.A. Services	350	(169)

Non-recurrent expenditure

Buildings	990	(200)
Plant	<u>1425</u>	<u>(200)</u>

GROSS TOTAL	2775	(571)
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Z.

Appropriations-in-Aid

NET TOTAL	<u>2775</u>	<u>(571)</u>
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The Board:

- (7) Approved the 1958-59 estimate amended as above and noted that it was being included in the Atomic Energy estimate.

9. NEXT MEETING

The Board:

- (8) Agreed to hold their next meeting at 2.30 p.m. on Tuesday, 1st April, 1958.

Distribution to Members

Lord Bridges
Professor P.M.S. Blackett
Sir David Brunt
Sir John Cockcroft
Professor J. Diamond
Mr. J. Gridley
Dr. H.W. Melville
Professor H.S.W. Massey
Sir Philip Morris
Professor N.F. Mott
Sir James Mountford
Professor R.E. Peierls
Sir Donald Perrott
Dr. B.F.J. Schonland
Sir George Thomson
Professor D.H. Wilkinson

Copies for information to:-

Sir Keith Murray
Mr. P.J. Searby
Dr. J.A.V. Willis