

Contributed 8/4/63.

NI/63/First Meeting

NUCLEAR INSTITUTE FOR RESEARCH IN NUCLEAR SCIENCE

GOVERNING BOARD

Minutes of the meeting held at No. 5, Old Palace Yard, Westminster,
London, S.W.1 on 28th March, 1963.

Present: Lord Bridges (Chairman)
Professor J. M. Cassels
Professor P. I. Dee
Professor B. H. Flowers
Sir William Hodge
Sir Harrie Massey
Sir Harry Melville
Sir Keith Murray
Dr. T. G. Pickavance
Professor A. W. Merrison
Dr. J. A. V. Willis (Secretary)

Apologies for absence were received from Dr. Adams, Sir Robert Aitken,
Professor Brambell, Sir John Cockcroft, Sir Alan Hitchman,
Sir William Penney, Professor Powell and Sir John Wolfenden.

1. MINUTES OF THE LAST MEETING

The Board approved the minutes of the meeting on 10th December, 1962.

2. MATTERS ARISING FROM THE MINUTES

Minute 6. Sir Keith Murray pointed out that the reference in Minute 6 to "the possible university of Chester" might give an incorrect impression. Professor Merrison said that he had been informed of Sir Keith's comment soon after the last meeting. He had done nothing which could embarrass the Institute by implying that they believed that there would be a university of Chester.

3. COMMITTEES

(a) Personnel Committee

Nuclear Physics Research Appointments: The Chairman said that Dr. Pickavance's recommendation of three permanent nuclear physics research posts on Nimrod and one more on the P.L.A. had been supported by the Physics Committee and approved by the Personnel Committee. The Personnel Committee had that morning approved the offer of appointment as a P.S.O. on the permanent staff to Dr. P. G. Murphy to fill one of these posts.

(b) Research Reactor Committee

Finance: (NIR/M.18 Minute 3) - The Board agreed to the allocation of £120,000 in 1962/63 to the work with research reactors.

- Charges for reactor facilities (Minute 4): The Board discussed the Research Reactor Committee's report that a good experimental programme proposed by Dr. Cochran of Cambridge University could not be accepted because of the high charge for a Pluto beam hole on top of the high cost of the special equipment. It was suggested that university use of A.E.A. facilities ought only to be charged for on a marginal cost basis. The Chairman said that he would invite Sir John Cockcroft, Sir William Penney and others to go into this matter.

Another point made in the discussion was that it was important to provide excellent neutron beams of defined energy, as required for various experiments, somewhere in the country. Dr. Pickavance confirmed that the Research Reactor Committee was looking into this matter, including the possible use of accelerators, and the possible future building of a high-flux reactor. The latter project was at present involved with international discussions.

(c) Joint Consultative Panel for Nuclear Research

In the absence of Sir John Cockcroft, Professor Flowers reported briefly on the meeting held on 6th March, which was concerned with the British part in a proposal being made by C.E.R.N. for a new high energy European accelerator. Professor Flowers said that the Panel had set up a working party to draft a case for consideration by the Advisory Council on Scientific Policy in May, in order that the British representatives on the C.E.R.N. Council might have some brief by June, when the C.E.R.N. Council expected to give preliminary consideration to the proposal.

In reply to a point made in discussion, Professor Flowers confirmed that the Working Party's paper would include a summary of the requirements for nuclear physics in the universities, the Institute and the present C.E.R.N. programme, as well as for the new proposal. This matter is further referred to in Minute 8.

(d) Rutherford Laboratory Visiting Committee

Sir Harrie Massey said that a meeting had been held two days previously. Several additions to the membership were proposed, so that each of the main user departments would have a representative on the Committee. It was also proposed that on this Committee members not able to attend should be encouraged to send alternates if they so wished. The Board approved these changes. Sir Harrie Massey said that very good experiments were being done at the proton linear accelerator including many by properly guided graduate students.

4. COMMITTEE MEMBERSHIP - Paper NI/63/1

The Board approved the following changes in the membership of committees:

General Purposes Committee

Sir Harrie Massey to succeed Professor Wilkinson.

Personnel Committee

Professor Powell to be invited to replace Sir Harrie Massey.

Physics Committee

Professor Powell to become a member.

Research Reactor Committee

Professor E. W. J. Mitchell and Dr. I. G. Campbell to become members. Sir Keith Murray said that he would like to retire, and this was agreed. Sir Harry Melville said that he frequently sent an alternate when unable to attend, and this was agreed.

Joint Consultative Panel for Nuclear Research

Professor Merrison to become a member.

Rutherford Laboratory Visiting Committee

Dr. A. Ashmore, Professor E. Bellamy, Dr. F. F. Heymann, Professor G. Hutchinson, Professor E. B. Paul and Professor G. Rochester to become members.

5. PROGRESS AT THE RUTHERFORD LABORATORY - NI/63/2

Dr. Pickavance reported on the progress at the Rutherford Laboratory as summarised in paper NI/63/2. He was asked whether there were good university experiments which could not be accommodated, and replied that the proton linear accelerator had always been very fully booked, but the running time had been increased to 24 hours a day a year ago and reliability had been steadily improved, so that no really good experiments had in fact had to be turned away. On Nimrod, however, the present evidence suggested that more good experiments would be proposed than could be dealt with. The Chairman said that the additional money for the proper exploitation of Nimrod, shown in the five year forecast, would clearly have a big effect here.

The Chairman said that an important aspect of the Institute's work was the encouragement of experimental high energy physicists and their support with the best equipment and facilities, so that this country should be an attractive place in which to work. With Nimrod nearing completion, he invited members of the Board to consider whether there was anything further which the Institute ought to be doing in this direction, and to make suggestions to him.

6. PROGRESS WITH THE ELECTRON LABORATORY - NI/63/3

Professor Merrison reported on the progress with the Electron Laboratory, as summarised in paper NI/63/3. He said that the Ministry of Housing and Local Government had not yet decided whether a public enquiry could be dispensed with. If not, the enquiry was to start on 19th June.

7. BUILDINGS AT THE ELECTRON LABORATORY - NI/63/6

7.1 Professor Merrison reminded the Board that the A.E.A. Engineering Group had been asked to make the initial plans and estimates for the buildings at Daresbury. This had been done, at a cost of about £25,000. He now recommended that the A.E.A. Engineering Group, Risley, should be invited to supervise the actual building, under arrangements described in section III of paper NI/63/6. Two particular advantages of Risley over a private firm of architects were that they were very close, and that they were in a position to undertake all of the work themselves, and to throw in large resources in case of need.

In discussion it was mentioned that Risley were bound to charge their actual costs, and that the suggested rates of fee of 15% for full service and 5% on "package deal" buildings were therefore only estimates. It was also made clear that the Institute would retain full control and financial responsibility for the project. After some further discussion, the Board agreed that the A.E.A. Engineering Group should be invited to supervise the building work.

7.2 At the Chairman's suggestion, the Board decided to set up a small panel consisting of the Chairman, Professors Cassels and Flowers, a representative of the A.E.A., Professor Merrison and some members of the NINA Project Committee, to examine the building proposal and estimate in paper NI/63/6, before seeking additional funds.

7.3 Professor Merrison submitted revised 5-year forecast figures for the Electron Laboratory based upon the new building estimate.

8. FIVE-YEAR FINANCIAL FORECAST 1964/5 to 1968/9 - NI/63/4

The Chairman said that he had received a letter from Sir Alan Hitchman drawing attention to two items which were likely to be particularly difficult for the Treasury to accept in view of their 2% p.a. figure, namely the additional cost for the proper exploitation of Nimrod and the acceleration of the construction of NINA. The Board, however, decided that they should not delete or reduce any of the items in the forecast. After the changes made by the General Purposes Committee, and with minor amendments to the Electron Laboratory figures corresponding to the new building estimate, they considered it to be a realistic forecast of the minimum requirements, as far as they could at present be foreseen, for carrying out the Institute's work properly.

The Board agreed that the forecast would no doubt be referred to Ministers, and that it should be presented for consideration together with:-

(a) the support of high energy and nuclear physics research in universities, including the current D.S.I.R. review of the needs for nuclear structure research;

(b) the support of the present C.E.R.N. programme;

and (c) the proposed new European high energy accelerator.

Dr. Pickavance was asked to make sure that Mr. Turnbull knew that all these matters would be coming forward.

On a point of detail, it was agreed that the term "future major schemes" as used in the paper gave a false impression of completeness, whereas there might well be other schemes during the period of the forecast. A better description should be found.

The Board authorised the submission of the forecast figures in paper NI/63/4, through the A.E.A. to the Minister for Science, subject to any necessary minor amendment. They instructed the Secretary to prepare a draft of the forecast in a form suitable for this purpose for consideration by the Chairman. They also authorised Professor Flowers to use the Institute's forecast figures, in the form finally approved in his Working Party's paper referred to in Minute 3(c) above.

9. ANNUAL REPORT 1961/62 - NI/63/5

The Chairman invited criticism of the draft annual report, and there was general agreement that now that the Institute was really beginning to do its main job, the report ought to reflect the enthusiasm and achievement of the laboratories more vividly. The rather dull form with numbered paragraphs giving facts and figures, which had been copied from the A.E.A. and several other bodies, should be changed, and the report should be written so as to be interesting to journalists, M.P.'s and the "thinking public". It should show clearly where the Institute's work fitted into the National picture and should show other scientists how much the Institute did to advance science. It was thought important that the report should be written by one hand, and the Secretary was asked to approach a successful technical writer.

It was agreed that the 1961/62 report, being already late, would not be re-written on the lines described, though it might be shortened a little further. Members were asked to write to the Secretary by 19th April if they had any further particular amendments to make.

10. TIME OF MEETINGS

The members present agreed that 2.15 p.m. would be a more convenient time for future meetings in London, and the Secretary was asked to enquire whether the time would suit the members not present.

J. A. V. Willis,
Secretary.