

NATIONAL INSTITUTE FOR RESEARCH IN NUCLEAR SCIENCEGOVERNING BOARD

Minutes of the meeting held at 5, Old Palace Yard  
Westminster on Tuesday, the 15th November, 1960

Present:- Lord Bridges (Chairman)  
Professor F. W. R. Brambell  
Professor P. I. Dee  
Sir William Hodge  
Sir Harrie Massey  
Sir Harry Melville  
Sir Keith Murray  
Professor R. E. Peierls  
Sir William Penney  
Sir Basil Schonland  
Professor D. H. Wilkinson  
Dr. T. G. Pickavance  
Dr. J. A. V. Willis (Secretary)

Apologies for absence were received from Sir Robert Aitken, Sir John Cockcroft, Sir Alan Hitchman, Professor N. F. Mott and Sir James Mountford.

1. Minutes of the last meeting

The Board approved the minutes of their second meeting of 1960, held on the 20th of June.

The Chairman said that the recommendations on future policy on high energy accelerators, after amendment in accordance with the discussion recorded in Minute 3 and submission to members by correspondence, had been transmitted to the Minister for Science.

2. Progress at the Rutherford Laboratory

Dr. Pickavance reported that the proton linear accelerator had been in operation at 30 MeV for about six months. Sufficient high-power triode valves for regular operation at 50 MeV were expected early in 1961, and full 24-hour operation should follow later in the year. The machine was in very full use and teams already had to wait longer than was desirable for experimental time.

In the construction of Nimrod, all the magnet blocks had been installed except those in use in the magnet model VI. Surveying and aligning was in hand, and had been completed on several octants. Three-quarters of the magnet coils had been received and installation of them had begun on three octants. In the power house the foundation block for the rotating machinery had now been poured, and the building should be completed before the end of the year. The prototype polepieces had been delivered and accepted, and the last significant design decision had been taken. The contractor's delivery estimate for the production pole pieces had been quite unsatisfactory, but after a series of discussions it was believed that ways had been found of speeding up this work. The vacuum vessel remained the greatest technical problem, but additional staff had been concentrated upon it and satisfactory progress continued. The first prototype vessel was well advanced in construction.



Dr. Pickavance reported that the Project Committee had felt obliged to amend the estimated completion date to September 1962. The target date for the first operation with properly engineered beams remained at January 1963 so that only three months was left for commissioning the machine. He could not be sure that this would be sufficient.

Of the rest of the Laboratory, Dr. Pickavance said that the pre-fabricated office block was now occupied: the extension to the main laboratory and office block was in hand and due for completion in August or September 1961. Until then there would be very severe overcrowding. The scheme for heavy laboratories would go out for competitive tender. A first batch of 32 houses for staff had been approved and other housing schemes were in hand. Recently it had appeared that Institute staff might not be accommodated in AERE hostels. If this was so, it would be necessary to build a staff hostel quickly, Coseners House being required for university visitors.

Sir William Penney said that the most probable reason for not accommodating Institute staff in AERE hostels was simply lack of accommodation. Dr. Pickavance was asked to look into the question whether an additional hostel was necessary, including the possibility of sharing such a hostel with the AERE or Culham laboratory.

### 3. COMMITTEES

#### 3.1 General Purposes Committee

The Board took note of the "shadow cut" in the estimates which had been accepted by the G.P.C.

#### 3.2 Personnel Committee

The Chairman said that the Personnel Committee had agreed on some amendments to paper NI/P/60/7 on consultants, which would be re-issued. Some further comment was made on the patents agreement for consultants, and it was suggested that while the agreement should give strong powers to the Institute, it might be possible to make available an indication of the circumstances in which they would be used. The Secretary was instructed to make proposals on this point when submitting the revised paper.

#### 3.3 Visiting Committee

Sir Harrie Massey reported on the meeting of the Visiting Committee on November 11th. He said that it had been agreed that the number of experiments on the P.L.A. should be limited to about the number now scheduled, though there must always be provision for exceptional cases. The Committee had discussed the principles on which experiments might be selected, and would meet again in six months time to make firm recommendations. In the mean time the Committee recommended that university departments should be informed that the machine was now heavily booked. The Board accepted this recommendation and asked Dr. Pickavance to consider carefully with Professor Massey how it should be carried out.

Sir Harrie Massey said that in the case of Nimrod it was necessary to start already the process which would lead to the selection of the first experiments, so that the required beams, equipment and layout would be available in time.

There were already committees concerned with experiments using bubble chamber techniques and emulsion techniques



respectively, and they would no doubt coordinate suggestions for experiments with these techniques on Nimrod. The Visiting Committee had thought it desirable to set up in addition a working party containing a strong representation of theoretical physicists, to suggest the principal objectives to be aimed at irrespective of the techniques used. The working party would be asked to make a first report in time for the Visiting Committee's meeting in six months time.

4. Report by the Research Reactor Committee

The Board considered the Research Reactor's Committee's report NI/60/13, in which further recommendations were made in the light of Sir Harry Melville's statement that funds for only three university reactors would be available in the next three years.

Sir Harry Melville said that the Treasury had made an overall allocation of additional money for capital schemes including university reactors and many other items. Subject to the decision of the D.S.I.R. Research Grants Committee he thought that three university reactors could be provided in the next three years but he saw no prospect of a fourth in that time. Also, it would be at least two years before there was actual experience of the use of the first reactors.

The Board accepted the financial limitation with regret and in the circumstances approved the Research Reactor Committee's report, adding a strong recommendation that the reactors provided and also other existing reactors such as those of the AEA and the privately owned reactors Merlin and Jason should be made as widely available as possible. The Institute's policy of supporting university use of the AERE reactors was recalled and Sir Harry Melville said that the D.S.I.R. was prepared to receive applications for support of experiments in the commercial reactors.

It was agreed that the Institute should reply to the Universities which had applied for reactors, informing them of the recommendations made. The Secretary was instructed to draft these replies for the approval of the Chairman. In the case of Birmingham and the Scottish group this could not yet be done as the Research Reactor Committee required further information from the Scottish group before making their recommendation.

5. Adoption of Superannuation Schemes

The Board took note of paper NI/60/12 and resolved as follows:-

"Subject to the approval of the Lords Commissioners of H.M. Treasury, the National Institute for Research in Nuclear Science hereby determine that their officers and persons employed, who are eligible under the rules of the scheme concerned, shall become members of one of the following superannuation schemes unless, in any particular case, it is otherwise determined:-

- (a) The U.K. Atomic Energy Authority's principal non-industrial superannuation scheme.
- (b) The U.K. Atomic Energy Authority's Protected Persons superannuation scheme.



- (c) The U.K. Atomic Energy Authority's Industrial superannuation scheme.
- (d) The U.K. Atomic Energy Authority's superannuation (special classes) scheme.
- (e) (In the case of a certain class of fixed term staff which has been defined in agreement with the Central Council of the FSSU only). The Federated Superannuation System for Universities."

J. A. V. Willis  
Secretary,  
Rutherford High Energy Laboratory,  
Harwell, Didcot.  
24th November, 1960.