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NATIONAL INSTITUTE FOR RESEARCH IN NUCLEAR SCIENCE

GOVERNING BOARD

**02251** Review of the Institute's Programme

Note by Sir John Cockcroft

1. The Physics Committee, at their meeting on 19th December, 1963, reviewed the Institute's programme at the request of the Governing Board. Their recommendations are summarised in the following paragraphs.
2. The main items on the programme should be the following, in order of priority:
  - (i) Adequate use and development of existing accelerators in the United Kingdom and C.E.R.N. The two Directors will prepare papers on proposed future developments at the two Laboratories, for a future meeting of the Committee.
  - (ii) Support of the European accelerator programme with emphasis on building the proposed new high energy machine in this country.
  - (iii) The proposed nuclear structure research laboratory.
  - (iv) Eventual replacement of Nimrod and Nina by new high energy machines. The inclusion of this item, at this place in the list, expresses the Committee's belief that there will be no need to consider a third Institute high energy laboratory if the European project goes ahead on a site in this country. The project referred to as "second major site" in the Institute's financial planning papers is, therefore, dropped from this list of proposed projects.
  - (v) Research on a small scale on new methods of accelerating particles, on storage rings, and on particle detection systems. These three items belong to any properly balanced programme at the Rutherford and Daresbury Laboratories, and both Laboratories are interested to some extent in all of them.
3. As the Physics Committee minutes (NI/PC/17th Meeting) make clear, two other projects which were in the former programme have been omitted. One of these is the major extension of the P.L.A. to pion-producing energies. It is now considered most unlikely that such a project will be wanted in the near future. There may be a need one day for a "pion factory", but an extension of the present P.L.A. will probably not be the right solution. The research reactor, which has figured in one way or another in the Institute's programme from the beginning is also omitted, but in this case it is because the Physics Committee does not feel able to judge it in relation to the other projects.
4. The Committee fear that the present shortage of computing facilities may recur in a few years' time. They have set up a working party to prepare a report on future computing needs in nuclear and high energy physics.