

NATIONAL INSTITUTE FOR RESEARCH IN NUCLEAR SCIENCE
WORKING PARTY ON FUTURE ACCELERATOR POLICY

1. The main meeting of the working party has been arranged to take place in the "Honours Reading Room" in the new Chadwick Laboratory, Liverpool, starting at 9.30 a.m. on the 28th March and carrying on, if required, on the 29th March.
2. The object of the Working Party is to consider the needs of the United Kingdom during the next 10 years if it is to play a leading role in the field of elementary particle physics and as far as possible to make specific recommendations. The Working Party will be expected to submit a report to the National Institute which, if it is accepted, may be submitted to the Government.
3. In order to frame these recommendations it will be necessary to consider the following points:-
 - (a) Whether a second National Institute laboratory is necessary or desirable.
 - (b) Whether, as an alternative to a "National" laboratory, several small "local" accelerators should be built at or near a number of Universities.
 - (c) Whether it is possible to decide on the type of accelerator that should be built and if so what the total cost of such a project is likely to be. If, as may well be the case, it is not possible at this meeting to decide which accelerator to build it is desirable, at least, to limit the number of those that will require further consideration.
 - (d) Whether a location for the laboratory can be agreed upon.
 - (e) When such a project could be started and what the rate of expenditure would be.
4. To aid discussion a list of high energy accelerators built or known to be in the course of construction is attached. A list of the more practicable accelerators has also been compiled and divided into three groups.

- (a) those accelerators which could be built from existing knowledge.
- (b) those accelerators which could be built following some development work.
- (c) those accelerators which could not be built until further basic investigation had been completed- Notes of explanation and justification of this list by Mullett (Paper No. 1)

5. The following papers are in the course of preparation and will be circulated, it is hoped, in time for study before the meeting:-

- (a) Present performance of the C.E.R.N. 25 Gev synchrotron and estimates of the performance of future alternating gradient synchrotrons - Hine. (Paper No. 2)
- (b) Estimates of the yields of secondary beams as a function of proton energy - Morgan and Galbraith. (Paper No. 3)
- (c) Theoretical implications of experiments with neutrinos - Salam and Matthews. (Paper No. 4)
- (d) Electron - positron accelerators for the multi-GeV region - Gunn. *et al* (Paper No. 5)
- (e) A note on the possible extension of the Rutherford Laboratory proton linear accelerator - Stafford. (Paper No. 6)

6. Professor Cassels has been asked to be prepared to express his views on the value of electron synchrotrons in the Gev energy region and to summarize the current thinking in America on neutrino experiments.

7. Professor Devons has also been asked to be prepared to express his views on the current thinking in America on neutrino experiments and to acquaint the working party with the current views on high energy proton linear accelerators.

G. H. STAFFORD.

16th March, 1960.