

*Extract from Science Board Minutes
29/30 May 1974*

13. HIGH-POWERED LASER FACILITY SB 30/74

The Acting Chairman in introducing this paper stressed that the proposal for establishing a high-powered laser facility was at a very primitive stage of development. Much further assessment would be necessary before any sensible estimate could be made

of what would be involved in the project and what it would cost.

Professor Coles re-emphasised the point made in the paper that the project would play an important part in providing a cadre of trained manpower available for any subsequent large-scale national research programme that involved plasma compression.

The Chairman of Council said that it was important to view the proposal in a wide context, which might conceivably involve questions of national security. The Atomic Energy Authority had a strong interest in this area, and were anxious to collaborate with the Council on future large-scale developments. They recognised that the activity in this area in UK universities, though modest in scope, was of very high quality, and could bring together more expertise than the Authority at present had at its own disposal. The Authority's effort in this field was likely to be concentrated on their Harwell establishment, which strongly suggested that the Rutherford Laboratory would be the most appropriate Council establishment to be associated with any future developments of the present proposal.

Dr Smith stressed the purely scientific importance of the proposal. Laser techniques provided the only practicable route by which the academic community could readily gain access to the very important field of high-density plasma studies. He did not think that security problems would be serious, at least in the earlier stages. This was a very exciting and attractive proposal which should be pursued vigorously.

In discussion the Board strongly endorsed Dr Smith's view. They saw the proposal as exceptionally important, and considered it essential that the Council and the country should be involved in this field. In presenting the case to Council it should be shown to be not solely a competitor with other contenders for existing resources but as a claimant for additional funds. The project would open up a new area of physics, and in the longer term could well involve very high expenditures comparable with those of other major scientific fields such as nuclear physics or astronomy. In this connection it was stressed that this project should not be regarded as comparable to, or as an alternative to, the synchrotron radiation project; they were distinct both in kind and in scale.

The Board:

- 1) expressed its very strong support for the proposals set out in the paper SB 30/74;

- 2) AGREED that they would wish to submit to Council a bid for funds to enable them to establish a high powered laser facility for use by university scientists;
- 3) INSTRUCTED the Office to seek the cooperation of the Rutherford Laboratory in looking more closely at the resources which would be needed to carry out the project, taking into account the possibility of collaboration with AERE;

[P/AL/34]

14. SRC ANNUAL REPORT 1973 SB 28/74

The Board NOTED the Science Board's draft contribution to the Council's Annual Report 1973 and AGREED to forward any comments to the Secretary.

[P/AA/05]