

Argonne National Laboratory

OPERATED BY THE UNIVERSITY OF CHICAGO

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TELETYPE TWX ARGONNE, ILL. 312-257-2409

April 12, 1965

Dr. T. G. Pickavance, Director
Rutherford High Energy Laboratory
Harwell Didcot
Berks, England

Dear Dr. Pickavance:

We have been terribly distressed to hear that the troubles you have been having may lead to an extended shutdown at Nimrod. It occurred to us that some of your particle physicists or accelerator physicists might be able to alleviate the effect of this misfortune to some extent by spending sometime here working in collaboration with our staff. We have been hesitant about getting in touch with you about this because we realize that our intentions may easily be misinterpreted. However, since all of us know that any of the accelerator laboratories may find itself in similar difficulties at sometime, it seemed to me that you would interpret this inquiry in a generous spirit.

What I should like to suggest is that arrangements be made for a few members of your staff who would find it profitable to work here until they can resume their activities at Nimrod. They could continue as employees of Rutherford Laboratory and probably should have their travel expenses covered by Rutherford Laboratory. We might explore the possibility of our supplementing their income to take account of the differential in cost of living if you felt that to be desirable. The number of your people whom we could accommodate would necessarily be limited because of limitations on space, technical help, secretaries, and so on. I am sure that you understand this problem.

If you find this proposal to be acceptable, I shall ask Dr. T. H. Fields, Director of our High Energy Physics Division, and Dr. L. C. Teng, Director of our Particle Accelerator Division, to explore the matter further. Your suggestions as to procedure would certainly be welcomed.

Dr. T. G. Pickavance

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Please let me know your reaction to this suggestion just as soon as possible so that we may take any steps that are indicated.

Sincerely,

Bob Sachs

Robert G. Sachs
Associate Laboratory Director
for High Energy Physics

RGS:sac

SCIENCE RESEARCH COUNCIL

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XXXXXX CHILTON,

21st April, 1965

Professor Robert G. Sachs,
Associate Laboratory Director
for High Energy Physics,
Argonne National Laboratory,
9700 South Cass Avenue,
Argonne,
Illinois,
U.S.A.

Dear Bob,

Thank you very much for your letter of April 12 and for your generous offer of help during Nimrod's shutdown. Certainly I do not misunderstand your intentions in making this offer, and I am extremely grateful to you.

We are rebuilding the rotors of both our alternators, using end-plates of a stronger material. Although there are some subtle phenomena in the motion of the rotating parts of the alternators, which are not yet fully understood, we and the manufacturers are convinced that the substitution of stronger end-plates together with some minor modifications to reduce stress concentration effects, will overcome the fatigue problem which caused the first alternator to fail. We hope to operate Nimrod on one alternator in September (full energy, reduced repetition rate) and on both in October.

In the meantime we are operating at low energy (500 MeV or so) by connecting the rectifiers directly to the AC line, and in this way we can do nearly all our accelerator development work. We may be able to go up to 2 GeV in this way without offending the electricity supply authorities, and this would enable the high energy physicists to set up their equipment for the next series of experiments.

Finally, we are discussing with CERN how they may be able to help in the short-term situation which, hopefully, we think we are facing. They are offering to run one of our experiments in their heavy liquid bubble chamber, and another in their hydrogen chamber. Two of our counter/spark chamber experiments may turn out to be feasible there, at a time which would make it profitable to mount them at the GPS rather than to wait for Nimrod. We are sure that the bubble chamber runs will help us greatly, but we are not yet sure that the saving in time and in the future load on Nimrod would be big enough to justify our putting CERN to the trouble of mounting our counter work there.

If, therefore, we meet our program dates of September and October 1965 for Nimrod, there will be no need for us to take up your generous offer. If we suffer long delays for any reason, then our situation will become serious, and we should certainly be most grateful if you would keep your offer open against this possibility.

Thank you again,

With best wishes,

Yours sincerely,

T. G. Pickavance

c.c. Dr. G. H. Stafford
Dr. L. C. W. Hobbis ✓
Mr. L. B. Mullett