



The Journal of the Rutherford High Energy Laboratory

Official Opening of the Rutherford Laboratory and Inauguration of Nimrod

Extracts from the speeches at the Opening Ceremony on Friday, 24 April 1964

Lord Bridges, Chairman of the National Institute -

'The Laboratory was set up to provide facilities for research by members of the staff of the Universities (and of other bodies) in a field where the cost of modern apparatus is so great, that facilities can only be provided on a national basis. Perhaps the most important feature of this organisation is that the nuclear physicists of the Universities come here to carry out their experiments, in which they look for help and support from the staff of the Laboratory. This sort of arrangement depends of course for its success, on close partnership between the different teams at work. But it calls for more than this.

We want University staffs coming to the Laboratory to feel that they are coming to a place which is in some sense theirs, which is an extension of their own and other Universities. And we want them to know how much we welcome their visits here and how determined we are that everything possible should be done for them. We want them to feel that to do this is not merely our duty, but something which we enjoy doing. Indeed, so far as possible, within the limits of an establishment run under Government rules, we do our best to cosset them and make them feel happy.

I am sure that this spirit will always continue. And that in this way the Laboratory will be doing something very important. It will not only contribute to the growth of knowledge in nuclear physics, but it will also help in keeping alive the essential links between advanced teaching in the Universities and fundamental research.'

Dr. Pickavance, Director of the Laboratory -

'Accelerators are usually inaugurated very shortly after their first operation. Here there has been an interval of eight months which can be blamed on me. We chose this date a year ago, and I took an unjustifiably gloomy view of

the NIMROD programme at that time. I cannot remember now what were the particular difficulties which bothered me then. But today's proceedings have gained something from this delay, because we can tell you that we have developed NIMROD sufficiently to schedule it reliably for high energy physics, with enough intensity and enough ancillary equipment for serious experiments. We operate regularly at 3 or 4 times 10^{11} protons per pulse, which is 30 or 40 times the intensity achieved during the first operation. We hope to reach 10^{12} protons per pulse by the end of this year, and will then see whether we can go any higher. We are very pleased with NIMROD; in spite of its complication it is reasonably docile.

The universities, together with the AERE groups and our own staff, have made a good start on their research programmes. There is no shortage of important research problems for NIMROD, and there is no shortage of imaginative physicists anxious to mount experiments with which to attack the problems. We shall be able to make good use of every hour of operating time we can squeeze out of the machine, and every improvement we can make in its performance and its equipment.

... High energy physics is a truly international field, and it is a great pleasure for me to acknowledge here the close collaboration we have enjoyed, and the generous help we have received, from high energy laboratories in other countries. I also use this occasion to acknowledge publicly the invaluable help we in the Rutherford Laboratory have had, and continue to have, from the UKAEA, and the efforts of our many contractors who have erected our buildings and built our equipment to our exacting and, I am sure, often exasperating specifications. Finally, I express my gratitude to my own colleagues for their hard work, often in difficult circumstances, and their loyal support.'

Sir John Cockroft -

'The long term objective of high energy nuclear physics is to understand the relation of the four basic forces of the Universe - gravity; the classical electromagnetic interactions which are the basis of chemistry, solid state physics and biology; the strong nuclear forces which hold nuclei together and the rather mysterious weak nuclear interactions which govern the behaviour of neutrinos, muons and radioactive decay. But before we reach this distant goal, it is very likely that many other, now unpredictable, discoveries will be made with our powerful new instrument.

So we would maintain that our central position in science, making possible as we do an understanding of the development of the Universe, the evolution of the elements, the behaviour of atomic nuclei, the application of fission and fusion, justifies continued support by our Government, expensive though it is, and we are most grateful for this. Our major immediate task is to obtain the maximum possible number of experimental hours from NIMROD during the coming fruitful years. We will look forward as Rutherford would have done, to the results.'

Professor Weisskopf, Director-General of CERN -

'This is a great day for the community of physicists in the world. A new accelerator is born. It is one of those great institutions that have been compared by other people, with the cathedrals in the middle ages. A new one is erected here and will serve the purpose to which we are devoted, the search into the nature of matter, into the solving of the secrets which nature has still hidden from us. It is a moment of rejoicing that here, a new centre of this type has been created and in all the nations in the world where these activities go on, this means progress. It means new promises.

... NIMROD, like all other accelerators, are a part of a world effort and this is one aspect, perhaps, of the most impressive significance in this work. Here we are striving for aims common to all mankind, independent of national and of political frontiers. NIMROD is, and will be, one part of it and it should also be considered

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(continued)

as a machine that collaborates with the international effort in this research. We have already promised that this is understood here, perhaps better than at other places. I hear that a French bubble chamber will soon work at NIMROD and will help to produce results. This is the right spirit in which to go. It is not that the means that have been provided here by Britain should be given to the other nations. No, it is a collaborated effort where the means developed somewhere else are put together with the means developed here in order to produce better results. This is a good beginning. The NIMROD accelerator is part of our world effort to penetrate into the secrets of nature. This is the most worthy aim of humanity as a whole. Let us hope that NIMROD will help and contribute to it as much as we know British science has contributed to it since the beginning.'

Rt. Hon. Quintin Hogg, Secretary of State for Education and Science -

'Having seen the guest list I have no doubt that the whole of this very distinguished company, and not only the staff, know quite exactly what we are about and do not require a Minister to tell them.

To them no doubt it is, if unaccustomed in practice, at least commonplace as an idea that we should be inaugurating a machine costing eleven million pounds of the taxpayer's money, which has taken seven years to develop from the moment when, on my advice, the decision was taken, the only purpose of which is to accelerate approximately to the speed of light a stream of almost inconceivably small particles with the object of creating other particles even smaller whose length of life after they have been created can only be measured in much less than microseconds.

It is, however, as well to remind ourselves that in any generation before the present we should have been considered mad to do this and that even at the present time, the great majority of those who have actually paid for this machine have not the remotest conception what it is about, and if they had might be quite likely to ask what good they might expect to get out of it.

... The acquisition of knowledge for its own sake is essential to the well being of a civilised country. Moreover, such knowledge being obtained is apt to have more revolutionary consequences than even the discoverers can measure at the time, and far more so than other more immediately useful types of information with more obvious parsnips in the buttering process.

... A university is a place where original minds must be allowed to climb the Everests of the scientific and scholarly Universe simply because, like the mountain, they are there. NIRNS, though in effect a consortium of university institutions, still belongs to the intellectual Alpine Club of university life.

However, this in itself presents a difficulty. Eleven million pounds is more than you have to spend on a professor of philosophy or history - and, of course, the cost of these modern machines is by no means limited to the one off. All form a pattern of interconnected facilities. We have the 30 GeV machine at CERN so expensive that it took twelve nations to build it. Now we have NIMROD here, and not fifteen miles from here Professor Wilkinson's tiny little accelerator in the Keble triangle which will cost about a million. NIRNS - the true parents and only begetters of NIMROD have already cajoled the Treasury into providing a baby sister - an electron accelerator called NINA appropriately enough since we live in a wonderland near the birthplace of Lewis Carroll. Round the corner will be demands for machines of 300 GeV and even 1000 GeV which, at least in my opinion, will only be sensible to build on a world scale. Not even the combined nations of a continent can afford nuclear science on that scale. And of course, to the cost of the accelerators must be added the cost of the giant computers, like ATLAS, and other accessories which are necessary to their proper working.

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(continued)

... All this means that we are engaged today on what is essentially an act of faith - one of the greatest a human society has made - faith that is, in the value to a nation, of knowledge acquired for its own sake, of brains engaged in free speculation about the ultimate nature of the Universe and the structure of matter. It is as much an act of faith as Ely Cathedral and in the end, faith of this kind is the sort that moves mountains.

I have long had this faith myself. I accept, of course, that when experimental science becomes a significant part of our total economy as nuclear science is, we must, by one means or another, hammer out priorities and set some limit on the ambitions of scientists. Yet, in an age when the human intellect is engaging on these speculations, I have it deeply in my heart that if this country can no longer emulate the power of Imperial Rome, as we have done until recently, we can at least aspire to the intellectual eminence of an Athens in the modern world. And if experience be any guide, such a position may well carry with it, too, a political and economic prestige which will justify, even from the material point of view, the efforts we have made in the purely speculative field.

It is with these thoughts in my mind that I have much pleasure in declaring THE RUTHERFORD LABORATORY OPEN and will now inaugurate NIMROD. May he prove a mighty hunter of particles, strange and less strange, K mesons, anti nucleons, and hyperons, and all the rest, and let him be a magnet to attract to this country brains and talent and imagination and shed lustre both on those who use his facilities and those who had the imagination to design him, and those who had the courage to order him, and not least on the poor British taxpayer who has to pay for him.'

Extracts from the address by Dr. Pickavance to the Press on Wednesday, 22 April 1964

'The two machines (NIMROD and the PLA) are extremely powerful research instruments. The PLA fills an important gap by operating in a relatively neglected energy range - too high for the electrostatic generators which are much used in nuclear research, but below the energies of the true high energy machines which are used to study the unstable sub-atomic particles. We believe that, with its ancillary facilities, it is at present the most powerful machine in the world in this energy region. ... NIMROD now joins the really big machines capable of supporting "front line" research in high energy physics. There are 12 others now operating in this class, 6 of them in the USA, 3 in the USSR, and 3 elsewhere in Western Europe. In terms of particle energy, NIMROD is fifth from the top (second in Europe), but in terms of beam intensity it is already among the leaders (3 times 10^{11} protons per second at 7 GeV).

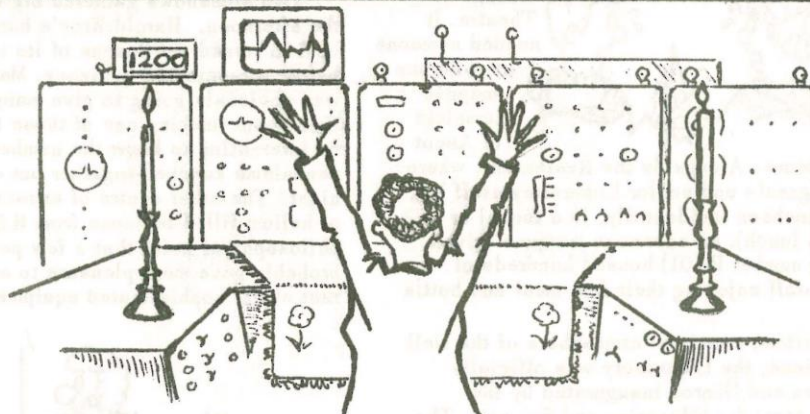
... NIMROD is exceptionally well equipped with ancillary apparatus for the first stages of its research programme - we believe, better equipped than any comparable accelerator has been, so soon after its first operation. Developments in the science and technology of this field are very rapid, however, and the effort on research equipment and methods will have to be sustained and extended.

... We must join in the research ourselves, if we are to be a research laboratory and not a "service station", but it is our policy to give the maximum amount of machine time to universities consistent with operational efficiency and a healthy scientific basis for our own work.

... How can we justify the large expenditure and effort on one field of pure research? Technological fallout has often been quoted (and contested) in defence of vastly more expensive programmes, and the same argument can be applied to high energy physics. But this can never be a justification; it is merely a bonus. The fundamental point is that science is an essential part of our culture, and therefore it is vitally important to develop the most creative branches of science. Few would challenge

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(continued).

the statement that the allocation of support for pure research should follow the directions which the leading minds find most challenging, although there are difficulties in putting it into administrative practice. A central and particularly challenging field such as high energy physics should certainly be supported, even though it is expensive and gives no guarantee of direct returns beyond its share of the output, vital for human progress, of trained minds from the educational process which, at its most advanced level, must be coupled with research. The overall problem, obviously, is to decide how much money should be invested in research, and how to distribute it between pure and applied science and between individual fields. It is an extremely difficult problem. Science is a complex structure which could be seriously harmed if, for example, the criterion for getting a grant bigger than some arbitrarily chosen sum were to be a promise of quick economic returns. Pure and applied science feed on each other and prosperity for both is essential to our future progress.'



'ESSENTIALLY AN ACT OF FAITH.' MR. QUINTIN HOGG.

That Was The Week That Was

Throughout the week 20 - 25 April, the Laboratory made an exhibition of itself.

On Tuesday, the Press Photographers arrived. With experienced eyes they scoured the Laboratory and picked out the best exhibits - the ladies in question appeared in the daily papers next morning. Everyone was very helpful, providing tables, ladders, cranes, anything the photographers called for, to get the shot they wanted. The science-fiction look of the Cockcroft-Walton equipment on the PLA attracted many a camera and beam lines and octants were popular. 'The Times', in particular, did us proud with a back page spread of photographs including an excellent shot of the PLA N $\frac{1}{2}$ magnet. David Wilson, the science correspondent of the BBC, accompanied a BBC television team and was fascinated by the potential of the NIMROD maze of passages and tunnels as the setting for a thriller. We are apprehensively awaiting a request

to film the next chapter of 'The Avengers' at the Laboratory.

Wednesday was the turn of the Press Correspondents and about sixty representatives of the national press and technical journals, including many famous names from the world of scientific journalism - Maddox, Haslett, Herbert, Stubbs, etc. . . . - had a very full day, looking at our Laboratory for the first time. Outside opinion had it that we received good coverage, both in quantity and quality, as a result. The 'New Scientist' gave a full article to NIMROD and 'The Guardian' covered us on three days - the Press visit, the Opening Ceremony and, a few days later, an article entitled 'The uses of Nimrod.' Inevitably, some of the information presented, eventually appeared in somewhat garbled form but it was fascinating to see how the popular press projected the awe inspiring might of the accelerators with images like 'curled like

THAT WAS THE WEEK THAT WAS - (continued)

a giant python' (Evening News) and 'where boffins play with lightning' (Daily Herald). An aside press question was 'How many people work at the Rutherford Laboratory?' Fortunately, the answer, 'About 10%', did not get wide publicity.

Friday was the big day of the Opening of the Laboratory and the Inauguration of Nimrod. Sleek limousines purred through the Laboratory gates bringing together a very distinguished gathering. Dignified, gentlemen, wives in an of hats, made Coffee Lecture only to release round the ring to the illusion Royal Enclosure. Alongside the Restaurant, where the official guests and senior Laboratory staff had luncheon (luncheon incidentally, is a formal or ceremonious lunch), an enormous marquee (given the building number R 101) housed hundreds of Laboratory staff enjoying their free meal and bottle of beer.

In the mellow, convivial atmosphere of the well wine and dined, the Laboratory was officially declared open and Nimrod inaugurated by the Secretary of State for Education and Science. The warbling note, 'Message 4' and the beam electrode signal indicating that the Nimrod beam was on, all came through as planned. The sonorous, Message 4 voice of Ted Eglinton was referred to on Radio Newswreel at night as 'Nimrod answering Mr. Quintin Hogg.' Many of the guests then toured Nimrod and the PLA and the smiling departing faces seemed to indicate a very successful day.

On Saturday there was a great invasion of the Laboratory by staff, relatives and friends and representatives of outside firms. No detailed count



was made but an estimated number is about 5,000 visitors in all. Glorious sunshine set the seal on the afternoon. The car parks were packed solid. 800 set teas were served in the Restaurant and up to 300 cups of tea in the Coffee Lounge. The film of the Laboratory was shown throughout the afternoon. People actually queued to see Nimrod! And all over the Laboratory, people were milling about - some with awestruck faces, some glowing with pride at what Johnny was doing, some obviously muttering 'My feet are killing me.' It deserves to go on record that Leslie Werrell's mother, now over 90, was one of the visitors and went round Nimrod which was enough to exhaust an athlete.

Two sideshows gathered big crowds throughout the afternoon. Harold Wroe's harmonic pendulum in R 25 turned out dozens of its intricate patterns before a fascinated audience. Many a young lad was obviously going to give many a father a worrying time about 'making one of those things' and it would be interesting to know the number of embryonic pendulums knocked together out of meccano that night. The other centre of attraction was the supply of helium filled balloons from R 8. It is a nice philosophical point that a few pennyworth of balloons probably gave more pleasure to more people than the rest of our sophisticated equipment put together.



A special mention ought to be given to the ladies who looked after the children's creche in R 20. Over a hundred infants up to five years old, in various stages of hysteria at the apparent abdication of responsibility on the part of their parents, created bedlam. The courage of their warders in restraining themselves from fleeing from the scene deserves a medal. Every now and again, a sober cry of despair came from the Tannoy system, 'Would Mr. Billinge and Mr. Southworth please go to R 20'.

THAT WAS THE WEEK THAT WAS - (continued)

By six o'clock the exodus was well underway. Buildings bubbling with life an hour before were deserted and the specially prepared exhibits looked forlorn. The debris of the week remained to be cleared away. Some haggard people breathed a great sigh of relief that the week was over and that, overall, things had gone well.

On Monday the Laboratory was settling back to normal.

THE LABORATORY
will be
featured in
the Summer issue of
'HARLEQUIN',
the AERE Leisure Magazine.

Snippets from the Press

'Inside the magnet, the protons will crackle and flash as if the 150 nuclear scientists in charge were playing with lightning. Said Dr. John Thresher, one of the scientists: 'It is probable that we will discover entirely new particles from which the whole universe is made.'

Daily Herald
23 April

'Naming a new sauce after a nuclear machine at Harwell yesterday - caterer Mr. William Burroughes. This raisin and rum sauce was called 'Nimrod Sauce' after the machine set in motion by Mr. Quintin Hogg. "If he'd kept his peerage, it would have been 'Hailsham Sauce' but I drew the line at having 'Hogg Sauce' on the menu", said Mr. Burroughes.'

Daily Mail
25 April

'Breathes there a man with soul so dead, who never to himself has said, this is simply deplorable. My own, my native land sunk to fifth place in the World League of Proton Synchrotrons?

... Of course the first thing we must do as a nation is to exorcise that subconscious feeling that Nimrod is somehow basically funny, in common with all things that proceed in continuous circles, such as mice on tread wheels, Fabre's revolving caterpillars, people on the Inner Circle, or 'The Music Goes Round and Around.' We must rid our minds of the nagging refrain that you push the injector valve down, the protons go round and around, yoo-hoo-hoo-hoo, and they come out in the experimental chamber here.'

Notes and Comments
New Scientist
7 May

Who is Sylvia? The Solution to the problem in the April Issue.

Each woman bought as many feet as she paid farthings per foot, and each mother paid 8s. 5½d, (i.e. 405 farthings) more than her daughter. If the number of feet bought by mother and daughter are M and D respectively we have

$$M^2 - D^2 = 405$$

$$(M + D)(M - D) = 405$$

M - D must be a factor of 405, and since M and D are positive M - D is positive and less than M + D. Factorising,

405 = 1 × 3⁴ × 5 which gives us five solutions

M - D = 1	when M ₁ = 203	D ₁ = 202	M ₁ ² = 41209	D ₁ ² = 40804	
"	3	" M ₂ = 69	D ₂ = 66	M ₂ ² = 4761	D ₂ ² = 4356
"	5	" M ₃ = 43	D ₃ = 38	M ₃ ² = 1849	D ₃ ² = 1444
"	9	" M ₄ = 27	D ₄ = 18	M ₄ ² = 729	D ₄ ² = 324
"	15	" M ₅ = 21	D ₅ = 6	M ₅ ² = 441	D ₅ ² = 36

Mrs. Robinson spent 288 farthings more than Mrs. Evans, so they are M₄ and M₅ respectively. Mrs. Jones spent about four times what Mrs. Evans did, so she is M₃. Mrs. Smith spent most of all, M₁, leaving Mrs. Brown M₂.

Mrs. Brown bought 63 feet more than Bessie who is therefore D₅; Annie bought 48 feet more than Mary and so they are D₂ and D₄ respectively. Emily spent 2912 farthings less than Annie and is therefore D₃. This leaves Sylvia as the daughter of Mrs. Smith.

Afternoon Out

Pendon Museum

Let's get rid of the word 'museum' to start with. This is no musty monument to the past but a living project still in its infancy. Instead of being housed in the usual Manor House with embossed Regency wallpaper, it is housed in a large terrapin with the roof falling down. Instead of inducing boredom it can stir real enthusiasm.

The project took shape in the mind of Roye England, an Australian who acquired an early passion for trains which grew in intensity when he moved to England and got to know the Great Western Railway of the years around 1930. He lived on the hills beside the Vale of White Horse and his enthusiasm spread to the old thatched villages. Since everything was changing, he set out to capture in miniature the atmosphere of the villages and the railway and bought an ex-public house at Long Wittenham where he put up a large hut to house the models. A small team of craftsmen, regarded as probably the finest team of model makers in the country are now engaged on the project, trying frantically to record in their work some English scenes of 1930 before they are destroyed forever.

As you enter the building the first things you see are railway relics, standard museum fare such as a mauve edged card listing the guests on Queen Victoria's funeral train, posters, lamps etc... But over to the left is displayed what has been possibly the most famous model railway in the world, now on permanent loan to Pendon. It is called the Madder Valley and was built entirely by John Ahern who died a year or so ago. The model represents a river-side country town of 1930 with its small harbour and outlying villages all served by a typical light railway of the period.

It was revolutionary when it was first put together because, for the first time, landscape and the detail of the town and villages received as generous attention as the engines and carriages. Model railway settings have in fact been divided into before and after Ahern. At first glance the scene is pleasing. On closer attention it is fascinating. Everything is handmade and the detail is delightful.

In the second, larger, part of the building is every schoolboy's dream - a vast working model railway, though it is designed for grown-ups rather than children. The scene is set on the edge of Dartmoor and, over wild moorland, an exact replica of one of Brunel's vast timber viaducts serves as an excellent platform to examine the fine workmanship of the model trains. The trains are just perfect and every care, including 12 years research, has gone into making each detail an authentic record of the engines, carriages and goods wagons of 1930. The amount of work which must have been involved in achieving such a high degree of detail, historical accuracy and realism is

fantastic. One express train with its coaches, for example, standing some two inches high and about ten foot long is quoted as taking 4,000 hours to build.

The Dartmoor scene is unfinished but at a still earlier stage, is the most adventurous scheme of all. The idea is to construct a whole model village to be known as Pendon Parva (meaning Little Hill Village). This will have its setting beside the Vale of White Horse and will consist of tiny models of typical, completely authentic buildings from different villages in the area as they were in 1930. Research alone has taken years. Scores, sometimes hundreds, of photographs were taken of each cottage, house or farm. Measurements to the nearest inch were made inside and out. Every brick was counted and reproduced exactly to scale and even the different colouring of the bricks was noted and copied.

So far, the village inn and two substantial groups of buildings are virtually complete but it is estimated that over 20 years work remains to finish the whole village and the railway that will serve it. Despite the inevitable fascination of the Dartmoor railway scene, it is a group of cottages and a chapel intended for Pendon Parva that really stay in the mind. The minute detail both inside and out of this model has to be seen to be believed. 7,000 hours of work is involved in this small section of the village alone. Roye England can reel off the figures - "317 daisies on the lawn; that clematis has 51 flowers and 201 leaves and the plant stands an inch high; each chapel window is put together from 114 tiny diamond shaped panels. Everything about the cottages, inside and out, has been put together exactly as it was. When someone who lived in any of the cottages visits Pendon they peer in through the tiny, quarter inch square windows and say things like, "Oh, there's my chest of drawers - and look, the knob's still off the drawers in the kitchen!" This minute detail is impressive but it is the effect and realism that matters and it has been worth the care and patience that has gone into achieving it.

An enormous amount of work remains to be done if the models are ever to be completed and it is strange that no official body has taken the project under its wing. Even in its present early stages there is something unique and exciting about the place which makes it worth a visit. Be warned though that if you take your sons along, Father Christmas will be bringing model trains almost for sure. The hut may get a little uncomfortable in really hot weather and the last showing is then recommended, when fewer people will allow a better view of everything as well.

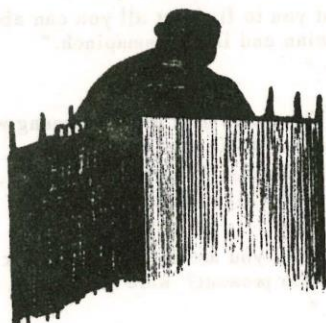
Pendon is open every Saturday, Sunday and Bank Holiday throughout the year and conducted showings take place at 3 p.m. and approximately at 4.30 p.m. and 6.00 p.m. The entrance fee of 2/6d (1/6d for children under 14) goes towards furthering the work.

How to get there - One route from the Lab. is to take the A 34 to Abingdon; right onto the Henley

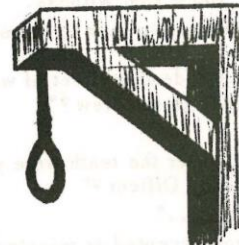
AFTERNOON OUT - Pendon Museum - (continued)

Road A 415 to Clifton Hampden; right again, over the bridge past (repeat 'past') the Barley Mow to Long Wittenham. Turn right down the main street to the old stone cross and then up a 'No Through Road.'

Pendon is on the right. Alternatively, make for Didcot going down the Broadway and then following the signposts to Long Wittenham.



The Case of the Poisoned



Accelerator

STARRING . . . Jerry Basin, the famous Scientific Counsellor.

SCENE I. A Court room in full session.

Mr. Hamberger, prosecuting counsel is about to open the case . . .

"Your Honour, the defendant is charged with murder in the first degree. We will show that on the morning of January the tenth, at six-o'clock, he wilfully and in cold blood, killed the accelerator Nimrod by poisoning its ion source. We will prove that he had motive, means and opportunity for this horrible crime."

"Call your first witness, Mr. Hamberger."

"Thank you Your Honour. I call Lewtenant Drag. . . Lewtenant, you were called to the Rutherford Laboratory on January the tenth. Would you tell this court what you found there."

"I went first to the Main Control Room and examined the log book. Nimrod had been dead since six a.m."

"Did you see the defendant at that time?"

"Yes, he was Duty Officer that night. He walked about the Control Room with a dazed expression saying, 'I didn't mean it. I didn't mean it.'"

"No more questions - your witness."

Basin rises ponderously and walks to the stand. He smiles.

"Lewtenant, you have seen many accelerator murders have you not? Isn't it true that the surest way to kill is to strike at the ion source - that without the source the machine is instantly useless?"

"That is so."

"And isn't this specialised knowledge - knowledge possessed by the Nimrod crew but not by anybody else?"

"I suppose so, yes."

"That will be all Lewtenant."

Hamberger jumps up.

"Your Honour, I have a question to redirect! Who on the crew had the most expert knowledge of all?"

"The defendant, the Duty Officer."

"Thank you Lewtenant!"

Hamberger looks triumphantly at Basin before calling the next witness.

"I call Dr. von Plasm pinch to the stand. . . You are employed by Ionbeam Incorporated as an expert on sources? Did you examine the Nimrod source and what did you find?"

"I find the source poisoned by vater vapour."

"Water vapour? Would you explain please."

"Ja vater vapour. These type of source are wery sensitive to vater. In my expert opinion, somebody breathed heavily on it."

"Thank you - your witness."

"No questions."

Hamberger looks surprised.

"I call the Senior Technician. . . you were in charge of the crew on the night of the murder? - would you describe the events leading up to the death of Nimrod."

"We had several faults during the night and at 0500 hours there was some trouble in the EHT area."

"I draw the Court's attention to this model of Nimrod. The ion source is situated in the EHT area. Was there anything wrong with it at that time?"

"No, the trouble was in another piece of equipment. We all went down to sort it out."

"Was the defendant present and if so what did he do?"

"He walked impatiently up and down and said, 'Either this machine's going to have a permanent breakdown

THE CASE OF THE POISONED ACCELERATOR - (continued)

or I am. I'm fed up with it.' Then he took the lid off the ion column and looked at the source. When we tried to start up again, Nimrod died after a few pulses."

"What did the defendant do when he examined the source?"

"He breathed on it!"

"Thank you - your witness."

Basin walks over to the stand carrying a sheet of paper.

"Wasn't the deadly effect of water vapour common knowledge in the crew?"

"No!"

"On December the tenth were you boarded for the job of Duty Officer?"

"Yes, but . . ."

"Were you accepted or rejected?"

"I was turned down."

Hamberger leaps to his feet.

"Your Honour all this is incompetent, irrelevant and immaterial. The professional career of this witness has nothing to do with the case."

Basin walks over to the Judge's bench with a serious frown.

"Your Honour I'm trying to establish bias on the part of this witness."

"I think I'm inclined to allow this line of questioning for the time being - objection overruled."

Basin consults his paper.

"I have here a photostat of the Nimrod Maintenance Manual, page 10364, paragraph 6. . . 'When handling the source, do not breathe in any circumstances!'
THE WHOLE CREW KNEW THAT DIDN'T THEY?"

"Yes!"

"I have no more questions of this witness."

Hamberger looks annoyed.

"I call the Duty Technician. . . Will you tell the Court what happened when you tried to fit the replacement ion source?"

"When we went to lab. ten for it, we found the replacement unit and all the spare parts smashed."

"Now the Duty Officer is the only person with a key to that lab. Did you in fact see anybody go in prior to your visit?"

"Earlier on, I saw the defendant leaving."

"Thank you! That concludes our case Your Honour. The prosecution moves that the defendant be bound over for trial in a superior court."

"Mr. Basin, do you wish to present a defence at this time?"

Basin looks hard at his client.

"I do Your Honour."

"In view of the lateness of the hour, court is adjourned until tomorrow."

SCENE II. In jail. The defendant sits at a table looking dejected.

"You must believe me Mr. Basin. I didn't smash those sources, I loved them!"

"Why didn't you tell me you had been in lab. ten? I can't defend you unless I know the whole truth. Now you had better start from the beginning."

SCENE III. In Basin's sumptuous office. His private investigator Drawl Break is present.

"Drawl, I want you to find out all you can about the Duty Technician and Dr. Plasmapinch."

"Will do Jerry."

SCENE IV. The Court next day. A young woman is on the stand. Basin approaches.

"You are the Radiation Protection Officer? . . . Were you present on the night in question?"

"I was not on duty."

"May I remind you, you are under oath! I ask you again - were you present? Were you in lab. ten?"

" . . . Yes . . ."

"I suggest you went there to confront your husband. You are the wife of the defendant are you not? You had hired a private investigator to follow him because you suspected an affair with another woman. When there was no evidence you followed him to work yourself didn't you?"

"Yes! He was always saying he had to work late on the ion source. When I found out it was true I was furious! He doesn't care about me, it's sources, sources all the time - that's all he ever thinks about! We had a row and when he left I smashed those wretched things."

"And when the defendant said, 'I didn't mean it', he was referring to this quarrel and not to the death of Nimrod?"

"Yes."

"No further questions. I recall the Duty Technician. . . . When you finished in the EHT area, who put the lid back on the ion column?"

"Well I did."

"So you could have done the poisoning!"

"But I . . ."

"In fact the only real evidence we have that the source was poisoned is that of Dr. Plasmapinch. Do you know that man?"

"No."

"If he had been called as John Smith would you know him?"

The witness is shattered.

"You are heavily in debt to Smith are you not? He lent you money which you over invested on the football pools - he was blackmailing you wasn't he!"

"Why the dirty son of a . . . Yes I did it, but it was all his idea!"

"Let the record show that the witness is pointing at Dr. von Plasmapinch."

THE CASE OF THE POISONED ACCELERATOR - (continued)

Smith alias von Plasmapinch staggers to his feet and pulls off a false beard.
"I arranged it all! I've been working on a new ion source for years but nobody would believe in one invented by John Smith. I changed my name to von Plasmapinch but it was no use. With Nimrod dead I could have sold my new source to the Rutherford Laboratory.... It's the best source ever invented I tell you.... ha ha ha...."

He is taken away laughing dementedly.

SCENE V. Basin's office. The Duty Officer and his wife are there. They are reconciled. Break and Basin's secretary Stella are also present.
"Jerry, what put you on to von Plasmapinch?"

"The first thing was the modus operandi Stella. All accelerator killers use one method only. Here we had two methods - poisoning and battering - which suggested two different people. Once I knew the Duty Officer had been in Lab. ten, I knew there must have been someone with him. Then he told me about his wife - he had been shielding her till that moment.... The real break came when Drawl turned up the connection between the Duty Technician and Smith. The Technician had opportunity but no motive and Smith motive but no opportunity, therefore they must have done it between them.... Something bothering you Drawl?"

"Just one thing Jerry.... What exactly is an ion source?"

Personnel News

Comings and Goings

D. G. House joins Atlas Operations.
D. Williams joins Atlas Administration.
R. Sargeant joins Central Engineering.

J. R. Aggus, R. J. Swandale and Mrs. A. M. Swandale, Mrs. V. R. Wichmann and S. E. Nunn have left us.

Rutherford

Laboratory

Record Society

The Record Society presented its first programme on Tuesday 12 May, when two popular classics and a jazz work were played. The foundations of the Society were laid at a meeting held a week before when it became clear that there is a considerable interest in the Laboratory for lunchtime programmes of recorded music.

Many types of music are to be covered - classics, grand opera, operetta, jazz (ancient and modern), folk music.... Unusual items, the works of lesser known composers for example, will receive particular attention and when well known works are to be played, one of the outstanding recorded performances will be selected whenever possible.

The Society hopes to promote interest in all types of music. Membership is open to all Laboratory personnel and does not depend on providing records to be played. Many changes may be made before the Society settles to a regular routine but the present intention is to present a programme at least once a fortnight on Tuesday at 12.30 p.m. till 1.15 p.m. in the Lecture Theatre. The next programme will be on Tuesday 9 June.

Congratulations to -

Peter Gill, Nimrod Machine Physics, on his marriage to Mary Jackson on 4 April.

Janet Hoare, Nimrod Machine Physics, on her marriage to David Trotman on 16 May.

Suzette Cotter, Atlas Laboratory, and Mike Harold, Nimrod Machine Physics, on their marriage on 23 May.

Peter Clare, Personnel, and his wife Susan on the birth of a daughter, Alison Jane, on 9 April.

Brian Jones, N1 team, and his wife Jill on the birth of a daughter, Lesley Angela, on 27 April.

Mr. and Mrs. Rabbit on the birth of five baby rabbits, who can be seen occasionally nipping out for a feed from under the Library wing of R 20.