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Cover Photograph :
Mr. M. Snowden with
Russian visitors.

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Editorial

We are particularly happy at this time of year to print two articles concerned with Anglo Russian exchange science. The visit of a party of Russian scientists is reported on page (9) while Phil Duke writes on his visit to Moscow on page (6).

As well as being the fruits of improved international relations, visits of this kind can also promote improvement. Because of the universal character of their calling scientists are exceptionally well placed to transcend international barriers, and perhaps have a special responsibility in this respect.

Our thanks to those who have helped ORBIT during the year are the more heartfelt this year because of our uncertainty at not having a permanent editor. Certainly the executive end of the editorial board is thankful to their fellow members for their support. We are all very grateful to our contributors in the Laboratory and elsewhere for the undiminished flow of material, and would like to apologise to them for any less-than-courteous editing which they have suffered.

As we go to press we learn of the successful operation of the Variable Energy Cyclotron. Congratulations to John Lawson and everyone who has worked with him on this project.

Editorial Board:

T. R. Walsh, R. Hecken, D. R. Moore,
F. R. A. Hopgood, J. M. Coupland, K. G. McAinsh.

We send Christmas and New Year greetings to all readers of ORBIT.

FROM THE DIRECTOR



A year ago I ended my message to readers of Orbit by remarking that there were good grounds for believing that 1965 would be "another dynamic year". It has certainly been an eventful year, but one of the outstanding events, the alternator failure at Nimrod, was a serious setback which might well have made 1965 a static year. The failure occurred in February, and only towards the end of the year did we have the first alternator operational again. Fortunately a way was found to operate Nimrod at about 2 GeV without the alternators, and therefore it was possible to pursue a useful programme of work. The machine development programme went ahead very well indeed, with further improvements in beam intensity and adaptability, together with preparations and setting-up runs for the next round of high energy physics experiments. Some of the Nimrod experiments were mounted at the CERN proton synchrotron, and we are very grateful to CERN for their help. The French bubble chamber made several successful runs at Nimrod during the year. The helium refrigerator for the liquid helium bubble chamber was successfully commissioned, and the heavy liquid bubble chamber took its first pictures in its commissioning trials. In spite of the troubles, therefore, 1965 was quite a productive year at Nimrod.

The P. L. A. has continued to run extremely well, and, as has become customary, was further improved during its annual shutdown. The A. E. R. E. cyclotron and the Oxford electrostatic generator also progressed very well during the year.

One of the most important events of the year was the Oxford International Conference on Elementary Particles organised by the Laboratory. This highly successful event clearly demonstrated the healthy state of high energy physics in Europe in general and in Britain in particular. It was fully covered in Orbit at the time, and I will say no more here than to express again my appreciation of the way in which so many members of the Laboratory worked to make it a success.

During the year we sadly said goodbye to the N. I. R. N. S., which ceased to exist when the Science Research Council came into being on April 1st. But now we belong to an organisation with wider interests, and the whole of the national support of nuclear and high energy physics has been brought together under one Nuclear Physics Board. I am confident that we shall be able to continue and to develop further the special manner of working with universities which we built up under the wise guidance of the Institute and our former Chairman, Lord Bridges.

Next year we hope to mount our three large bubble chambers on the Nimrod programme, and to take delivery of a new and much larger computer to deal with the rapidly growing load of data to be analysed. I will not characterise 1966 with a single adjective, in view of what happened last time!

I wish all my colleagues in the Laboratory and in the associated universities, the S. R. C. and the Authority, and their families, a happy Christmas and a prosperous New Year.

J. P. H. van der

NIMROD-1965



Leo Hobbis

The catastrophic failure of the Nimrod magnet power supply at the end of February and the subsequent removal of both alternators from service has dominated the Nimrod scene in 1965. It seemed a particularly cruel blow when the experimental programme was making such good progress: the design intensity of 10^{12} protons per pulse had been achieved in the previous August, and operating time was increasing steadily. Eight counter experiments had been completed since the beginning of the high energy physics programme; our first separated kaon beam had been commissioned for the Saclay Bubble Chamber and this had just started taking pictures on an intensive basis.

However, we have been far from idle since the accident. A number of important achievements have been possible with the machine running at 2 GeV and reduced repetition rate using a direct connection to the electricity supply. (The absence of the stored energy in the alternator flywheel system is the main reason why we were limited to 2 GeV). First priority was given to machine improvements which would result in higher efficiency when 7 GeV running was resumed, and next to setting up the experiments which were in course of preparation together with any data taking which was possible at 2 GeV. The most important machine improvements have been in targetting techniques. It is now possible to provide two or more short (about 500 μ) bursts for bubble chamber use

on each machine pulse and the Saclay Chamber has been modified to take advantage of this, thus doubling its rate of data accumulation. It is also possible to share precisely the accelerated protons between two targets simultaneously erected in the beam. Again, it has been found possible when producing an external beam to skim off a small fraction of the beam being extracted on another internal target. The usefulness of the beam for counter experiments has also been improved considerably by the application of magnet current ripple filters which help to give a steady stream of secondary particles from the target; development of the filters will continue still further. All these improvements, most of which are achieved through very simple electronic control of the beam are of the greatest importance for the exploitation of Nimrod and are equivalent to a corresponding increase in beam intensity.

Reliability of the extraction system has been greatly improved, a vital factor for the next phase of operation when two experiments will depend on the availability of this beam. It is believed that the extraction efficiency at 2 GeV is about 12%; the performance at this energy is not necessarily representative of conditions at 7 GeV and there is good reason to believe the overall efficiency will be greater at the higher energy.

Five entirely new counter experiments have been mounted in a demanding installation programme making a current total of seven counter and two bubble chamber beams. These new beams have involved the installation of 22 quadrupoles, 23 wide bending magnets, 1 separator tank, 3 hydrogen targets, 1 polarized proton target, 2 Cerenkov counters, 5,500 tons of steel and concrete shielding as well as a host of small components. Most of the counter experiments mounted are almost ready to take data at 7 GeV. One has already had a low energy data run and the Saclay Bubble Chamber has taken about 250,000 pictures of interactions of pions and deuterons.

Machine reliability during these 2 GeV runs has generally been higher than ever before, over 90% efficiency having been recorded. We hope this is significant although it may partly reflect the reduced demand on the equipment when running on a curtailed acceleration cycle and at the lower repetition rate.

One alternator is now back in service after repair and the second rotor is expected early in the new year. The pole end plates, one of which fractured and so caused the original accident, have been replaced in stronger material and slightly modified in the critical region of the fracture. Fatigue model tests together with new calculations and strain gauge measurements on the alternator back in service, give confidence that the rebuilt machines will be satisfactory. Many difficulties have been met and overcome in this repair programme in which there has been full collaboration between the English Electric Company and our own laboratory team. Great credit is due to all of them. The accelerator has already begun operating for high energy physics on one alternator; in the current cycle there will be some running at 4 GeV and some at 7 GeV. Full 7 GeV operation should be resumed in February 1966. An average beam intensity of 1.7

$\times 10^{12}$ p.p.p. has been obtained at 4 GeV with some bursts as high as 2.2×10^{12} . This confirms similar observations made previously at 2 GeV and the same performance can confidently be expected at 7 GeV.

Although no-one will remember 1965 as one of Nimrod's brighter years, it has not all been marking time and we are now set for a great advance in 1966 which, besides a full experimental programme, will probably include a start on a new experimental area. (Listen for news of Hall 3).

The problems of increasing the intensity to 10^{13} p.p.p. will also be studied with special attention to ways of dealing with the higher levels of induced radioactivity and radiation damage which will then occur. The latter difficulties will be greatly alleviated if a highly efficient extraction system can be developed; machine studies to this end have already begun.

Post Script.

With the ink barely dry on my contribution we have suffered a further temporary setback - part of the plunging mechanism shaft broke a few days after the current run had started, fortunately without causing any serious damage to the machine. Then it was found that a large vacuum leak had developed in the r.f. cavity straight which has since been dismantled for repairs. A discharge has caused extensive damage here to the polythene insulator in the acceleration gap, although it is not clear whether there is any connection between this and the loss of vacuum which followed immediately on the plunging mechanism failure. It will take about two weeks to repair the cavity and get back on the air.

Seven Months in MOSCOW



Phil Duke

It is almost impossible to compress into a short article the many mental images and impressions provided by 7 months of life in the USSR. There are the bulbous domes of the old churches, the old ladies in their head scarves and long black coats and the young women carrying what are apparently large bundles of laundry but on closer inspection turn out to have babies inside. You cannot get the feel of life in Moscow unless you have been squashed to death (almost) in the bus going along Leninskii Prospekt or stood in the bitter cold to file through Lenin's tomb. Maybe the best thing is for you to come with me on a short tour of our time in Moscow.

We will start in our flat which was about 7 miles from the Red Square in the centre of Moscow. We had a bedroom, a living room (both with quite nice furniture) a kitchen and a bathroom. This amount of space was fairly typical of a Russian family apartment. The chief difference was that there were just the two of us living in it. Many young Russian couples live with their parents in the same amount of space and it is unusual to find couples with more than one child. Another difference would come to light if you opened our refrigerator. The thing itself would not be too unusual (especially amongst the professional class of people) but its contents perhaps would be. Food in general is 2 to 3 times more expensive than in England. However we bought a lot of our food at a special Russian shop which sells only for western currency. Food there was cheaper because they reduced the prices and there was a much larger variety of food available.

To get into town from our flat you must just take a 'bus to the University Metro station then

take the Metro itself to Karl Marx Prospekt. The bus rattles its way along and if it's raining, it leaks, but the Metro is clean and tidy and the trains run very frequently. You put your 5 kopek piece (the same price for any journey) into the slot at the gate and walk through on to the escalator. The gate is always open but a "magic eye" checks if you have put money in and takes appropriate action! The first station you come to is Leninskii Gory (Lenin Hills) which is on a bridge over the Moscow river. From the train you can see the University, the huge Lenin Stadium and maybe one of the hydrofoil boats which take folk for a pleasure cruise in the summer. If you get out at Karl Marx Prospekt, the first building you see is the Bolshoi theatre. The stage is huge. I shall never forget the second scene in Boris Gudounov when they had all three of the Kremlin cathedrals on the stage at once! The performances of Russian opera are wonderful. The ballet too is good although we found the ballerinas (at least those we saw) a bit disappointing. But the male dancers are real he-men who bound across the stage like gazelles.

About ten minutes walk from the Bolshoi is the other main theatre, the Palace of Congress, a very new building within the walls of the Kremlin. There are escalators to each floor and in the interval you can go and eat hot mushrooms in soured cream or pancake with caviar (both highly recommended!) on the top floor in the banqueting hall. I must explain that the Kremlin not only contains the seat of government which used to be the Czar's residence but also 2 theatres, three cathedrals and a park and all but the first are open to the public. There is also the state armoury which is now

Right:

Leninskii Prospekt on May Day.



Opposite:

A view of the Kremlin.

Below:

The Church of the Virgin at Fili.

a museum showing something of the fantastic wealth of the Czars as well as objects of great beauty. You can see there a carriage given by Queen Elisabeth I to Boris Gudounov. I was told recently that it would not turn corners properly so was hardly used - British Industry had its problems even in those days!

Just across from the Kremlin on the other side of the Red Square is GUM which is the oldest of several large "department" stores. It seems like a collection of little shops inside a grand, glass roofed arcade. The shop works on the three-queue system. First you queue at the counter to see what you want, then at the cash desk to pay your money and get a chit, then again at the counter to collect your purchase. It seems very cumbersome and makes shopping a much longer operation than necessary. The newer big stores, such as the "Moscow" on Leninskii Prospekt are much better arranged than GUM and it's much easier to see what you want but the three queue system operates there as well. There are self service stores but they are not very common.

Our flat was not very far from the Institute of Theoretical and Experimental Physics where I was working. One has to show one's pass several times before getting into (or out of) their equivalent of R.1. People seem to work quite hard - a coffee or tea break is a rarity and the lunch break is only a $\frac{1}{2}$ hour. Their working week is a little longer than ours but spread over 6 days instead of 5. They have a 7 Gev accelerator (strong focussing, unlike Nimrod) but its beam intensity is about 100 times lower than ours. This will probably improve next year when their 20 MeV linac injector starts working. At the moment they inject from a Van der Graaff at 4 MeV.

One of the main impressions which I have of Moscow is that of change and progress. New shops are being opened and new living houses are constantly being built to satisfy the demand for consumer goods and living space. Overcrowding is slowly disappearing and Russians are becoming better dressed and better fed. One can only hope that progress will also result in them being better informed about the west and able to travel to the west. I hope our visit helped a few Russians to learn about England as well as teaching us a great deal about Russia.



HAEMAMENTIA

A note by our Psychological Correspondent.

British readers of Professor Parkinson's excellent exposition of institutional behaviour must be surprised by the omission of haemamentia (bloody mindedness). It appears that even this astute observer of corporate mankind has been naive. It is this correspondent's opinion that Parkinson has confused haemamentia with injelitis.

Haemamentia is defined as intentional obstruction the purpose of which is to demonstrate the power of the obstructor. The difference between this and injelitis is clear. Whereas the injelitant will obstruct in order to advance his own position and to damage his rivals within the organisation, the haemamentiac will do the same in order to satisfy his inner craving for importance.

Haemamentia is often found in conjunction with injelitis. Indeed, as the symptoms are often identical, a differential diagnosis may be extremely difficult.

The serious student of institutional pathology must, of course, enquire into the factors which predispose toward haemamentia. I have space to mention only a few. In general it may be stated that the one necessary condition is an unsatisfied craving for power. Perhaps the incipient haemamentiac visualizes himself as a corporate Napoleon; if so, he will inevitably be unsatisfied and the onset of the disease is automatic. On the other hand, even if his ambitions are reasonable they may be beyond his ability. Incompetence is thus a causal factor in both injelitis and this form of haemamentia, though the diseases themselves are different.

Finally, there is the "take it out on your underlings" chain of causation. An imaginative man who serves under an injelitant boss will have his initiative continually frustrated. He will suffer. After a few years his moral fibre may have been so weakened that he will revenge himself on humanity by inflicting upon his subordinates the same treatment which has embittered him. Because this treatment may, in turn, drive the man's subordinates to haemamentia, and so on down through the grades, the sinister importance of this process cannot be over-estimated. In fact I would go so far as to say that, in many of the cases of epidemic injelitis reported by Parkinson, the disease would better be described as an injelito-haemamentiac complex in which the infection spreads mostly by the haemamentiac chain described above. It is only by the operation of the haemamentiac chain that one highly placed injelitant can rapidly poison the entire corporate organism. The mechanism suggested by Parkinson - preferential employment of the stupid (page 96 et seq.) - is far too slow to explain many cases of apparent galloping injelitis.

Even so brief an addendum as this shows that human motivation within the corporate colony is far more primitive than even Parkinson appears to have believed. Further research in this field will demand workers of exceptional fortitude

Editorial Note: Our Psychological Correspondent (whose identity cannot be disclosed for reasons of professional etiquette) would be interested to receive case-histories of haemamentia, but we regret that these cannot be printed.

U.S.S.R.-Exchange Visit

Frank Telling

On Thursday 2nd December a delegation of eight Russian scientists visited the Laboratory. After being greeted by the Director the visitors met the Division Heads and were given a brief outline of the work of the Laboratory during a coffee break in the informal atmosphere of the R.1 Common Room.

During the morning the delegation visited NIMROD and toured the Injector, Magnet and Experimental Areas. Later in the morning they visited ORION and were shown the Computer and film measuring laboratories.

After lunching with the Director and the Division Heads the delegation visited the P. L. A. where they toured the Accelerator and Experimental Areas. The remainder of the afternoon was spent in the P. L. A. Conference Room, where with the aid of interpreters and numerous cups of Russian tea, informal discussions took place on a variety of specialised topics with physicists and engineers from the Laboratory. After many handshakes the delegation departed at 5.00 p. m.

The visit was part of a programme for a USSR-UK exchange visit on accelerators and nuclear physics sponsored by the Research Group of the Atomic Energy Authority. The delegation spent two weeks in the United Kingdom and a very intensive itinerary included visits to several scientific establishments and universities as well as some industrial firms. To provide some relaxation for the delegation and possibly to prove that the United Kingdom also contributes to the arts, bookings were made for them to see 'Hamlet' at the Royal Shakespeare Theatre and the 'Barber of Seville' at Sadlers Wells.

Two members of the delegation Drs. R. M. Sulyaev and S. N. Sokolav returned to the Laboratory on the 13th December to lecture on the 70 BeV proton synchrotron at Dubna and on the planning of high energy physics experiments.

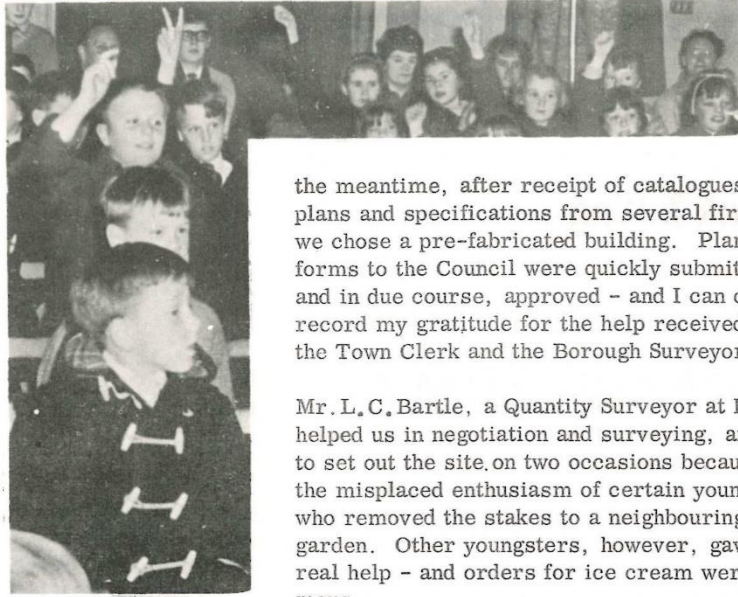
Below:

The Russian visitors view Nimrod.



u t s i d e
O H o u r s

Ernie Newbold



Several years ago I learned that the Wallingford Borough Council had reserved a site on their new housing estate - then at the planning stage - for a Church. I later gathered that the site had been considered by at least one Ecclesiastical body, who had turned it down. By the time I had discussed this with fellow enthusiasts, and we had surmounted the snags both real and imaginary, I found to my dismay that the Council had in the meantime changed their plans and left out the proposed Church. They said they would let me know if another site became available.

Having convinced the Council that the need was urgent, I and my family formed a junior Sunday School group in the Scout Hut at Wallingford, and for some six years we met there each Sunday afternoon, the group numbering between 20 to 40, from 5 to 15 years of age. Then came the day in June 1964, when to our delight we received a letter from the Town Clerk of Wallingford, saying the land for a Church was ours!

This was certainly a venture in faith, so I was considerably heartened, when an ex-Sunday School pupil, Frank Smith, joined the staff of the Science Research Council. He proved a tower of strength, and together we went ahead, seeking information, help and planning.

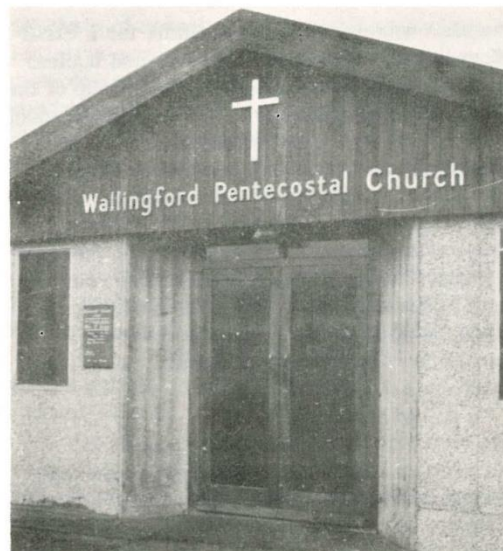
After endless correspondence with Solicitors, Local and County Councils, water and electricity undertakings etc., etc., and with the aid of several volunteers - the site was cleared. In

the meantime, after receipt of catalogues, plans and specifications from several firms, we chose a pre-fabricated building. Plans and forms to the Council were quickly submitted, and in due course, approved - and I can only record my gratitude for the help received from the Town Clerk and the Borough Surveyor.

Mr. L. C. Bartle, a Quantity Surveyor at Harwell helped us in negotiation and surveying, and had to set out the site on two occasions because of the misplaced enthusiasm of certain youngsters who removed the stakes to a neighbouring garden. Other youngsters, however, gave much real help - and orders for ice cream were enormous.

Trenches were excavated, the top soil removed, and then we poured, spread and levelled nearly 30 tons of pre-mixed concrete. Later, we laid the damp-proof membrane and the cement and sand screed floor, burning much midnight oil in the process. Here we were again greatly helped by a local policeman and his wife, who let us run a temporary light lead from their house - and the wonderful "mums" who provided cups of tea.

In due course the building was delivered and in an incredibly short time, erected. It was truly magnificent!



But we still had much to do! Partitions to be built; walls to be plastered; services to be laid and connected; lighting and heating to be installed; decoration, etc. etc., - yet help thundered in, often before we had considered the next step. A Polish neighbour plastered the walls; another neighbour did the decoration; a plumber friend from Harwell and son John, aged 18 years, carried out the whole of the electric lighting and heating installation.

Finally, in November last, the great day dawned, and the lady Mayor of Wallingford - Councillor Mrs. M. H. Simmons - officially opened, before a large crowd, the Wallingford Pentecostal Church. The dedication service which immediately followed was addressed by a missionary friend from India. Sufficient to say both the acoustics and the heating were fully tested!

Since then, help in many forms has continued. In our services we have been aided by two missionary doctors. Gifts of all types are a

daily occurrence, ranging from a Communion set to curtains, and from a "dormobile" bus to cash.

Five services, including Sunday School, "Sunshine Corner" and Youth Club, are held each week, and are attended in increasing numbers.

In the Spring of this year we organised a Campaign for the Children, and this was attended by over 1,000 local youngsters.

As I said earlier, this project started as a venture in faith. Reviewing our experience I can only say in great humility, that my understanding of the meaning of faith in Almighty God is much clearer; so much clearer, that I would now say "trust" rather than "venture", and I am reminded of the Bible statement -

"Except the Lord build the Church they labour in vain that build it"

Thanks be to God!

Antifeast

Peter Childs

It is not unheard of for a house magazine to publish its Christmas edition towards the end of March. Committing oneself to what at least sets out to be a festive piece, can be somewhat hazardous. There are other dangers. Who wants to read about Christmas anyway? The experience, like war, is enough. As with grey hairs, indigestion and overdrafts, it is impossible to escape. I will not dwell on the connective tissue of suffering. From the first long range bombardment of Christmas cards to the final mopping up operations of Boxing Day, the ritual battle is observed. Slogans are shouted. Strange and uplifting rites are performed under clusters of green berries and ancient myths are revived.

Consider Father Christmas. As a small boy I believed faithfully in him. "Daddy," I would trustingly ask, "how does he get in?" "He comes down the chimney, son," my otherwise honest father would reply. I would silently marvel at this considerable feat, and leave bread and cheese to sustain the gallant fellow in his levitations.

But what of the contemporary dad, rejoicing in his central heating? The descent of Father Christmas down a six inch flue, straight into a wall flame burner is incredible even to a three year old. Atomisation and reconstitution by means of cellular projection he would grasp without difficulty, (see Dr. Who. Ch. XXXVIII Verse 7) but combustion, as Joan of Arc said, is rather final. However, being a romantic dad he is determined to crush the young sceptic. They drive to town so that 'Santa' can be examined in the flesh, but alas! Where is the true Santa Claus? There exists not one benevolent old man, but a species complete with several mutations. How shall they be judged? There can only be one TRUE Father Christmas, the romantic dad insists. "I know", his little son pipes up, "It's the one with the whitest beard. The one whose beard is whiter than white". The contemporary dad is shattered. His romantic parts litter the toy department and on the way home from town, he is booked for driving 'Without Due Care and Attention'. (The Christmas tree in the boot obscured his rear vision as he pulled out to overtake eleven tank transporters).

So much for the Romantics. Broadly speaking, humanity can be divided into three classes. Seekers after the Pure Spirit, seekers after the distilled spirit, and those who hope to find one by means of the other. These are presumably the 'Don't Knows' of statistical fame, a group strongly represented in the Rutherford parish. These otherwise exclusive groups communicate with one another by means of cards. Such communication starts early in December when magnificent cards land with a pompous plop on the door mat. The barrage continues up to Christmas Eve when all the scruffy little late cards arrive. 'We were here all the time. The thought's the thing,' they say. Nobody believes them. They all go on to the mantle-piece and they fall off - about twenty five times. All except the Centurion tank with 'Merry Xmas' ballooning from its gun barrel.

This comes from a military school for fighting vehicles. It is almost as prized as the beautiful picture of an I. C. B. M. received from an American friend. Then there are those strange blank cards printed on superb paper and saying nothing at all about their origin. I suspect that this kind of card is designed by a committee. (The one responsible for the camel). The only firm decision arrived at after the October and November discussions, was that it should be white, fabricated from paper and of a suitable size. Then they went on leave rejoicing. But towering above all the others is a card of incredible magnificence. In taste, colour, size and message it is impeccable. It should be. It cost eight and sixpence, and comes of course, from your disgustingly successful brother-in-law. It is pregnant with prosperity and manages to convey the impression that it is but one of seven hundred others he has sent. By Christmas Eve its presence is so strong that you suspect a metamorphosis. It will actually BECOME your beloved brother-in-law.

Christmas Eve. The bells of Bethlehelem on one channel, the Beatles on the other. The children manage to get them simultaneously. The effect is sufficient to convert even Karl Marx to the capitalist orgy of Christmas. The mince pies are on fire and a mystery explosion at the back of the Christmas tree fuses all the lights. The carol singers on the doorstep triumphantly carry off your last half crown as you silently curse yourself for being a moral coward. And not only a coward, a mean coward.

In 1644 the puritans outlawed all Christmas celebrations (a law still in force in Scotland to this day.) Though you had little in common with this anti-everything group before. . . Well if it weren't for those ridiculous hats . . . But listen. It is midnight, and the carol service is drifting in over the radio. Decibels of choir are reflected between gothic transepts as they were a thousand years ago. The magic of Christmas is stealing in. Tantalising glimpses of what life could be like filter through the paraphernalia. A transient of joy comes, and for a priceless moment you are aware of love. Past and future merge and in its last movement, the otherwise discordant symphony of Nineteen Sixty Five ascends into a glorious climax.

Orbiting Around

Editor: H F Norris
Building R20, Ext.484.

Transatlantic Commentary

Dick Dowd (photo) who spent some eight months at the Laboratory is now back home in the States. Before he left we asked him if he would like to air his views of the English way of life, in Orbiting Around. We should like to thank Dick for his impression.



As I prepare to return to the U.S., I wish to make one definite disclaimer: No matter how it appears, the fact that Nimrod broke down shortly after my arrival and will resume work upon my departure is purely coincidental! With that settled, I can proceed with my impressions of England.

The most rewarding and yet surprising part of English life for us was that the English are marvelously friendly people. Contrary to our expectations (having been forewarned by an Englishman) we found the people to be jolly, helpful and above all hospitable. As we had been told that we would never be invited out, we really considered ourselves social successes of the first order when our neighbours promptly disproved this. Another thing that endeared the people to us was that the English speak English! Of course it is not really the same language but there are enough similarities here and there to make communication possible. And we loved all the various accents. Surely it would be dull if everyone spoke like the B.B.C.

We found it rewarding to immerse ourselves in the English viewpoint and, if you will, in the various problems of the country. Observing the parliamentary system and following the ups and down of a Socialist government was intriguing. We enjoyed the chance for a new view of foreign affairs (contrary to the popular press, it is different from the American) and especially the greater insight into the Commonwealth. And being very conscious of the immense domestic problems of the U.S., we have increased our perspective a good deal in realising that England

has its own set of pressing questions - the most basic and distressing of which, it seems to us, is the educational system which appears both over-specialised and, due to the 11 plus exams, wasteful of talent.

Finally, we liked the English way of life. It seems slower and more relaxed somehow. What could be more satisfying than a pint of bitter at a 13th century pub or a Sunday afternoon tea in an old Inn. Not even the rain matters then. We never tired of Sunday drives through the Cotswolds, and since we approached everything with an American outlook, we were continually pleased by the absence of billboards and neon signs, and fascinated by the buildings centuries older than the New World. Add to this the cathedrals, the ancient monuments and London, and eight months goes much too quickly. All told, we found it very easy to adapt to English life; after a couple of Sundays we didn't even run out of bread or eggs; and my wife fell so much into the spirit of things that she never would have considered trading her romantic coal fire for central heating!



Snow of Yester Year

Christine Wilson is leaving at the end of December, having spent the last five years at the Laboratory.

Christine worked at AERE for 18 months before joining the Rutherford in October 1960 as a shorthand/typist. Since 1962 she has been secretary to Mr. Walkinshaw. She has been active in the Civil Service Clerical Association and has served on Whitley, Staff Alliance and Association Committees during the past two years. Many people may remember her better as Christine Snow who married Alan Wilson, a former member of the Theoretical Studies Group.

Christine, who is now a C.O. Secretary is going to be a full time housewife for a couple of months before getting another job nearer home. Best wishes to Christine for the future.

A Hardy Biennial

Sid Crawford started his new venture in London on 5 November thereby ending his stay on the Berkshire Downs where he had been doing various two year stints since 1953.

Sid originally came to Harwell in 1953 as Stores Manager for a firm of engineers who were engaged in building reactors. In 1955, he became Transport Officer for the M.O.W. After another two years he joined the firm of N.C. Bailey as Office Manager, where he stayed until the contract expired in 1959. Brown Boveri then acquired a new office manager and Sid was busy again, engaging staff, dealing with PAYE and ordering materials etc. Two years later he was with Glover & Partners, consulting engineers. And so he continued with only one change and that was into Nimrods record office, until he left on 5 November this year. But even during this four year period Sid still maintained his record, as he joined NIRNS staff in - yes - 1963.

From 12 years Sid has a lot of stories to tell such as the one about the aircraft parked right up against his office door. Many readers will remember the American Air Force plane which landed at Harwell and the excitement of a rocket assisted take off that didn't come off.

Sid was one of the originals on the site at the time of digging the Nimrod hole and in fact saw the first spit dug by Sir John Cockcroft.

In his new job with British Brown Boveri he will have a staff of six who deal with the servicing and repairs of turbochargers for several hundred ships each year. In addition he has to improve and enlarge after sales service and to improve client relations. We understand he will still be seen around the Rutherford from time to time. With such a wealth of experience behind him we are sure that he will make a success of his new job.

November 5 1967 - now there's a date to bear in mind!

Congratulations to:

John Woodgate, PLA Mechanical Workshops, and his wife Sally, on the birth of a daughter, Louise Jane, on 25 October.

Mick James, PLA Electrical Workshops, and his wife Jean, on the birth of a daughter, Susan Louisa, on 26 October.

Helen Cottingham, Theoretical Studies Group, on her engagement to John Killick on 28 November.

The Overlanders

In the August issue we reported on a forthcoming trip to Asia by five travellers from the Rutherford Laboratory and A.E.R.E. News has slowly filtered through and although the present location of some members of the party is still hazy we can at least report on the earlier stages of their adventure.

Yugoslavia was reached via Belgium, the Rhine Valley and Austria, at the cost of one half-shaft. The route then followed the West coast to Split and Dubrovnik where they stayed for $2\frac{1}{2}$ days. The letter from Ron Baldry has this to say about it, "I now understand more than before why summer schools are held in Dubrovnik, a very charming place". From a camp near Kusadasi, in South West Turkey, he writes, "Sitting here by the blue Aegean Sea, gently lapping on the beach, under the shade of a bamboo roof ... it is very nice here but autumn is coming; the temperature is down to about 70° F in the shade and the water is cool. The management still have to spray water continuously on the lawn in order to grow some grass", and later on in his letter he says "the grass is imported from England!"

But back to the journey. After leaving Dubrovnik the route took them to NIS by "a pretty hairy road". They seem to have enjoyed Bulgaria, especially a couple of days spent at a camp on

the Black-Sea coast. On travelling Ron has this to say. "We find practically everyone very helpful and nice to us; even the lorry drivers move over sometimes". He comments about Istanbul, "for me the most interesting city I've seen on the journey. The driving at first seems maniacal, full of crazy American taxis, but having been in it for a while and learnt the rules, one can see that it is the way to drive in such a city". More repairs were needed as a front wheel universal joint had to be renewed, "in a strong wind and lots of sand."

Some $3\frac{1}{2}$ thousand miles from London found the party camping by the Aegean Sea in Southern Turkey, and intending to head south to the Taurus Mountains for 5 to 6 days climbing, then North to Teheran. At that time their hopes of continuing their journey through Pakistan into India seemed to be very uncertain. Petrol had been reported as difficult to obtain in Pakistan, and the border into India was another problem. Later we learned that the party had run into difficulties and had decided to split up. Don Owen and his wife Jennie have flown to Australia and Graham Olive to Vancouver, leaving Peter Rowe and Ron Baldry. These two it is thought, have plans to drive back to England by a different route.

A further progress report will be made as soon as the next pigeon arrives.

From Physics to Chemistry

Peter Clare is leaving to take up a new appointment as Technical Officer in the Department of Organic and Inorganic Chemistry at Cambridge University, on 1 January. He joined AERE in 1956 and worked in the Isotope Division and Establishments Branch before moving to the Rutherford in November 1960. After three years in the Personnel Branch and 18 months in the Accounts Section, Peter moved over to the HEP Group where he has been for the past nine months. His new post is concerned with the day to day running of the Chemical Laboratory as assistant to the Superintendent. He feels that it will be more like going to another division than leaving the Rutherford.

We understand that his colleagues are pleased that he has got a better job, but to desert the cause of physics for chemistry - well. However, we are sure they will join with us in wishing Peter every success in his new post.

Suggestion Award

At the thirty-second meeting of the Suggestion Awards Committee on Wednesday 24 November the following award was made.

Encouragement Award of £1 to C.R. Gascoigne.



B. Briscoe Secretary

Professor P.D. Murphy



Paul Murphy took up his new post of Professor of Physics at Manchester University on 1 October. He came to the Laboratory in January 1960 on a fixed term basis, subsequently becoming a member of the permanent staff.

Paul is head of the HEP Group at Manchester which will eventually carry out experiments on NINA. The group is already busy getting the first experiment prepared and this will be on the photo production of K^0 mesons. We understand he has inherited Rutherford's book-case at the University. He will not be lecturing, but confining his activities to research. However he has been given a grant to enable him to entertain undergraduates (a bag of threepenny bits for the coffee machine?)

Paul after arriving at the Rutherford in January 1960 spent the next 18 months at Berkeley. Since his return in August 1961 he has been joint Group Leader of the HEP Counter Group with John Thresher.

Comings and Goings

Dr M Conte joins Nimrod Machine Physics Group: Miss E M Stephens joins HEP Counter Group (Visiting Teams): K R Dent joins Nimrod HEPE Group: A G Rowson joins Atlas Operations Group.
B Bridgeman, J H Hardaker, T G Barr, G A Jackson and D G Sage join Nimrod Machine Engineering Group: P E Hatton, A J Shurmer and B A E Smith join Central Engineering Group.
J F Adey, P C G Harris and D C Howell join Finance and Accounts Group:
D P McAlpine and R P Studart join General Administration: Mrs. J Edmonds and Mrs. J M Marriott join Secretarial and Typing Group.
B A Trickett has transferred to Daresbury and Mrs A M Williams to London Office; G Ruffell and G K Morrison have returned from College for their first period of industrial training.

R B Wilson, W A West, S J Crawford, B Southworth, Mrs. G Collins and T Bennett have left us.

Record Programmes

Programmes will be held every Tuesday in January at 12.30 p. m. in the Lecture Theatre.

4 January	Military Band Music Played by the Royal Marines Band
11 January	Joan Sutherland "Art of the Prima Donna" (Stereo)
18 January	Louis Armstrong at the Crescendo Club
25 January	Mussorgsky: "Pictures at an Exhibition" (Stereo)