

Newsfront

Professor H A Brick CBE

Hermann Alexander Brick retired on 30 September 1975 from the Directorship of the ROE and the combined posts of Regius Professor of Astronomy in the University of Edinburgh and Astronomer Royal for Scotland.

He was born in 1905 and his early education in Berlin imparted a lifelong love of the classics as well as a strong interest in physical science. Although born into a military family, he became determined to follow a scientific career. Studying at the Universities of Bonn, Kiel, and Munich, he came under the influence of Sommerfeld, and it was in the new field of wave mechanics that he gained his first doctorate. On Sommerfeld's advice, and in the footsteps of his friend Unsöld, he decided at first to work on the application of the new atomic physics to astronomical problems. In Potsdam, however, joining the Einstein Institute in 1928 and the Astrophysical Observatory in 1930, Brick became interested in the newly developing field of the structure of our Galaxy. He pursued this work when in 1936, increasingly unhappy in the political atmosphere of Germany, he joined the new Vatican Observatory at Castel Gandolfo.

His long-cherished ambition to work with Eddington at Cambridge was fulfilled in 1937 when he was appointed to a post at the Solar Physics Observatory, later becoming chief assistant and John Couch Adams Astronomer. His work there included solar physics and the development of photoelectric equipment for accurate solar spectrum scanning; and many present astronomers are grateful to Brick for his encouragement during their undergraduate days at Cambridge.

In 1947 he was invited by Eamon



Professor Brick at his farewell reception

de Valéra, Prime Minister of the Irish Republic, who had a life-long personal interest in mathematics and astronomy, to re-open and modernise Dunsink Observatory. Formerly belonging to Trinity College Dublin, the Observatory had been closed since 1921, and on its re-opening was incorporated in the Dublin Institute for Advanced Studies. Telescopes for solar spectroscopy and stellar photometry were set up at Dunsink, and in co-operation with Armagh Observatory in Northern Ireland and Harvard College Observatory the A D H Schmidt telescope was established at the Boyden Observatory in South Africa for research in southern-hemisphere galactic astronomy. A notable event during Brick's directorship at Dunsink Observatory was the Dublin meeting of the Interna-

tional Astronomical Union in 1955. While he and his staff gave many public lectures in Ireland, Brick missed the University teaching that he had enjoyed at Cambridge. He was therefore happy that the Edinburgh post to which he was appointed in 1957 following the death of Professor W M H Greaves, combined the Regius Chair of Astronomy with the directorship of the Royal Observatory. To the traditional first-year lectures in astronomy, he added a new honours course in astrophysics run jointly with the Department of Physics. During the years from 1957 to 1975 he transformed the Royal Observatory from a modest observatory promoting national facilities to a major establishment. He encouraged the development of automatic plate-measuring equipment and the

extension of optical observations into the ultra-violet and infra-red, established an observing out-station at Monte Porzio near Rome, and set up a project for world-wide testing of potential sites for a national northern hemisphere observatory. Brick valued the link with the Scottish Home and Health Department under which the observatory operated during his early days, and regretted the transfer to the London-based Science Research Council in 1965.

Brick is a Fellow of the Royal Society of Edinburgh and a Member of the Royal Irish Academy, and for twenty years a member of the Pontifical Academy of Sciences in Rome. He received honorary doctorates from the National University of Ireland and the University of St Andrews. In the 1966 New Year Honours he was made a CBE.

He has retired to a gracious house in the country near Edinburgh, but it seems unlikely that gardening will entirely supplant his interest in astronomy.

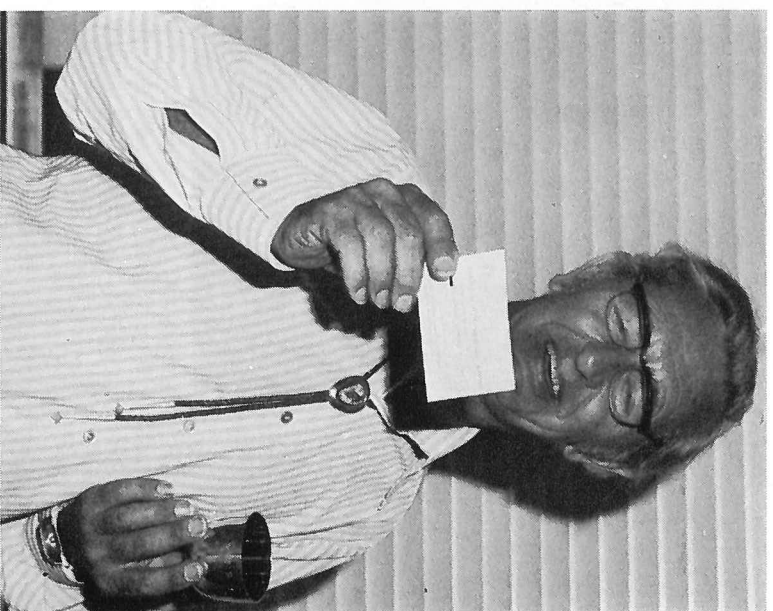
HEB, MJS

Dr Jack Howlett CBE

When the ocal number 70044772 ("tiding in execution...") re-appeared on the Atlas computer console at 15.00 hours on 15 August 1975, it signalled the end of a luncheon party and presentation to Jack Howlett, Director of the Atlas Computer Laboratory on the occasion of his retirement.

The Laboratory staff, together with a small group of friends and colleagues, gathered together to give him an informal luncheon party and afterwards Mr Christopher Jolliffe, one time Director of Science Division, presented him with a hallmarked sterling silver tumbler cup (a copy of a traveller's wine cup in use during the sixteenth and seventeenth centuries).

In addition he was given a presentation piece constructed from parts of the Atlas and 1906A computers, and the original Atlas Visitors Book containing evidence of the national and international groups



Dr Howlett admires his presentation gift—a silver tumbler cup (a copy of a traveller's wine cup)

with whom the Laboratory has been in contact.

In making the presentation, Christopher Jolliffe referred to the happy choice of Jack Howlett as Director of the Laboratory, after the very difficult negotiations in 1961 which led to the purchase of the Ferranti Atlas 1 and the decision to make this powerful computer available not only to AERE and the high energy physicists of RHEL, but to ensure that other disciplines in the UK universities would also have a substantial share of the new resource.

Supporting the good wishes, Bob Churchouse, formerly head of Programming Group and now at Cardiff University, reminded everyone of the rapid growth of computing and computers and the great influence that the Laboratory had exercised under Jack Howlett's leadership.

In thanking everyone for the gifts and the flowers for his wife, Joan, Dr Howlett noted that he had now worked for his living for 40 years almost to the day, and described the

exhilaration of a young numerical analyst working for the LMS railway when his hard won hand calculations proved correct as a 50 ton steam locomotive was run up to leave the rails at the predicted 105 mph! He referred to the debt he owed to Professor Douglas Hartree, the distinguished numerical analyst, his supervisor at Manchester University and to the early days at Harwell when he was invited to set up the computing section. He was still capable of wonderment at this remarkable device—the computer—and hoped that the initiatives and flexible approach to new problems which had marked the years of development of the Laboratory would continue to flourish under the new organisations to be established by SRC.

Later, in accord with local custom and at the request of the girls from Data Preparation, he was taken away to be dressed in an "emperor" costume complete with a laurel leaf crown, and given a scroll, which took the form of a diploma "for long and

faithful service" and amongst other well applauded qualities for "being the best boss we've ever had!"

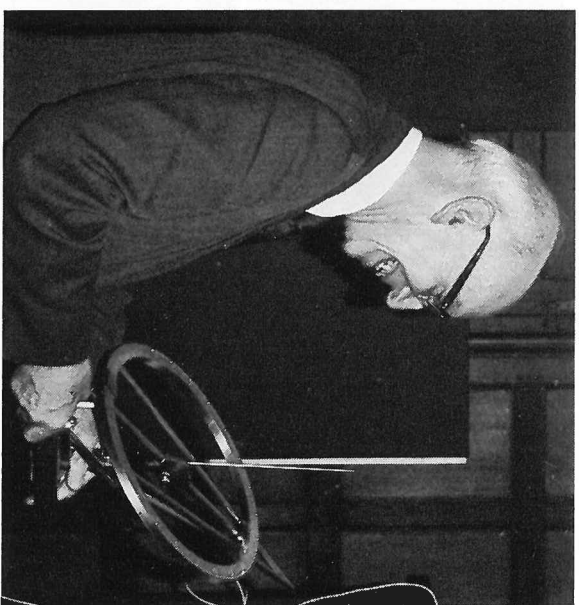
In switching the Atlas console to a display "70044772" (idling in execution . . .) Dr Howlett completed the final plans for Atlas; the console was to be on permanent display in the reception lounge. It is clear however that in his retirement Jack Howlett will be far from idle and he looks upon the years ahead as yet another phase of working for his living. Already he has a full calendar and will still play an active role in the computer world. With a truly international circle of friends and acquaintances, he will indulge his capacity to lead an interesting and varied life.

Dr Alan Hunter

Dr Alan Hunter, Director of the RGO, retired on 31 December 1975. Dr Hunter joined the staff of the Observatory at Greenwich in 1937 after he had obtained his doctorate at Imperial College where he did research in spectroscopy. Much of his earlier astronomical work was concerned with the photographic determination of the colours of stars and with an investigation into the reddening of starlight by interstellar matter. Also whilst at Greenwich, Dr Hunter was involved with photographic astrometry, that is to say the measurement of the relative positions of stars on photographic plates. This field of work, and in particular the determination of the distances of stars by this method, was his main interest when the observatory moved to Herstmonceux. He was closely associated with the adjustment of telescopes, and the successful re-erection of the telescopes on their new site in Sussex owes much to his expertise.

Dr Hunter's career embraced a variety of astronomical subjects. He was, for example, interested in the study of the Sun. Whilst travelling to observe a total eclipse of the Sun in 1947, he was in a plane which crashed killing the two other members of the expedition. Although Dr Hunter was badly injured, he showed great fortitude in recovering from the effects of the crash.

In a lighter vein, we mention one of his most talked about papers, that in



Dr Hunter was presented with a replica of the new sundial inaugurated by Princess Anne

which he examined the relationship between the occurrence of certain planetary configurations and that of matinee performances at the Folies Bergère. We understand that this was one instance when Dr Hunter relied on the observations of others; the purpose of the paper was to illustrate by the use of appropriate statistical models the unsoundness of a certain technique described elsewhere in the literature.

Dr Hunter was in charge of the Astronomy Department until 1961, when he became completely involved with the administration of the Observatory, first as Chief Assistant, then as Deputy Director, and finally as Director from December 1973 until his retirement. He was Secretary of the Royal Astronomical Society from 1949-56, Vice-President of the same body in 1956-7 and 1965-7, and President of the British Astronomical Association from 1956-8. He was awarded the CBE last year.

Undoubtedly, the most vividly remembered events of Dr Hunter's directorship will be those connected with the Tercentenary celebrations. The highlight of these was, of course, the visit of HRH Princess Anne to unveil the bust of John Flamsteed and to inaugurate the new sundial. However, it must not be forgotten that many important decisions affecting the future role of the RGO were also made during the past two years.

During a time of great change, Dr Hunter has played a vital part both at the RGO and in British astronomy generally. His invaluable advice will be missed everywhere both by many committees and by numerous individuals.

We all wish Dr Hunter well in his retirement.

New Year Honours

Our congratulations to Dr A W Merrison FRS who was made Knight Bachelor; Professor H Elliot FRS, Mr J M Ferguson and Professor E W J Mitchell who received the CBE; Mr H F Lovesey who was awarded an MBE and Mr M Dermody who was awarded the BEM. Dr A W Merrison FRS is a former Director of Daresbury Laboratory. Professor H Elliot FRS is a Council member and Chairman of ASR Board.

Mr J M Ferguson is a member of Council and Chairman of Engineering Board.

Professor E W J Mitchell is a former member of Council and Science Board. He is a former Chairman of the Neutron Beam Research Committee.

Mr H F Lovesey is a workshop manager at the Appleton Laboratory. Mr M Dermody is a workshop foreman at the Royal Greenwich Observatory.

Obituaries

Dr A W Lines

The death of "Freddy" Lines came as a shock to his many friends. The brief statement of his career and achievements in the Obituary columns of the press revealed nothing of the nature of the man himself. I wish, however inadequately, to add a little to what has been written to portray something of the character of a late colleague and friend.

After graduating at Birmingham, Dr Albert Walter Lines began his working life as a lecturer but was very soon swept into the war effort on radar, first of all on the R & D of airborne navigational systems and later as a member of the all-important group who introduced these new devices to the RAF and made them an operational success. There is little doubt that the imperious war-time need to take quick decisions and to settle for something that worked now in preference to waiting for something that might work better tomorrow were important formative processes in his career. This ability to size up a situation and take quick decisions made him the perfect man for the job when the formidable task was presented to him in the early '60s of helping to get the European Space Research Organization going.

Freddy has played a leading part in the early planning of the joint European space venture and the technical programme set out in the "Blue Book" was the work of a group of European experts chaired by him. This later became the blue print for the European Space Research Organization, of which he became the first Technical Director.

It was in this position that Freddy showed his immense skills not only as an engineer but as an administrator. His admiration for the "total technologists" ESRO recruited from some of the continental countries influenced his thinking when he later returned to the United Kingdom. At that time, however, it was fortunate for the United Kingdom that, if more by luck than design, we had produced a man who could match up to the "polytechnicians". The burden carried by the Technical Director of ESRO at that time was enormous.

Laboratories and control centres had to be built up in Europe and tracking and telemetry centres established over the surface of the globe; the first satellites were designed and contracts placed in a very difficult political climate; launching arrangements had to be negotiated with NASA; at the same time the immediate demands of the scientists were met by a hastily arranged sounding rocket programme; all of this with a staff recruited from all over western Europe most of whom had no previous experience in the space field.

The complexity of such a programme involving not only many material, legal and administrative problems but, what was often more difficult, national pride and sensibilities, would take volumes to describe. The scope for misunderstanding was limitless and the amazing fact looking back on these hectic times from the tranquility of the United Kingdom, is that so much was achieved in so short a time. A large part of the credit must go to Freddy. A born manager, whom life seemed to have fashioned carefully for the task, he knew instinctively when to leave things alone and when to intervene. His prime concern was always how things could be kept moving forward. He drove himself hard and expected others to do the same. Belying appearances at times, however, he was not a hard man and if he occasionally let people feel the cutting edge of his tongue, one felt it was more in sorrow than in anger.

He was perhaps difficult to get to know but an apparently brusque manner, which mellowed in his later years, concealed a warm-hearted personality and many people benefited from kindly advice conveyed diffidently in sentences punctuated by a hesitant "you know what I mean". He had a keen eye for the false argument and would lay it bare with impish glee. He had a firm belief in the essential simplicity of nature and dismissed many a scientist by reducing abstruse concepts to simple physical and preferably engineering explanations. It was this gift to understand what was what which enabled him to work in close harmony with the space scientists, to chide them when he felt they were making excessive demands and to back them when

he believed their case was sound.

Freddy suffered from ill-health after his return to the United Kingdom but he put a great deal of expertise and energy into setting up and defining the functions of the Engineering Division of the SRC. As Director of Engineering and Nuclear Physics he later brought his matter of fact approach to an area which was new to him. It was perhaps the misfortune of NP that he could give so little time to its affairs.

JB

Dr J A V Willis

Dr John Arthur Valiant Willis, 63, Rutherford Laboratory's first Secretary, died on 28 November.

He was educated at Bristol University where he read Chemistry. This was followed by nine years with the Tube Alloys Directorate. In 1946 he joined the Department of Atomic Energy of the Ministry of Supply and in 1948 became a member of the Extra-Mural Research Division, AERE, Harwell. He stayed at Harwell until 1954 when he was appointed Atomic Energy Representative on the UK Scientific Mission at the British Embassy in Washington. On his return to England in 1957 he was



appointed Secretary to the National Institute in Nuclear Science (NIRNS) and Secretary of the Rutherford Laboratory. In 1965 he became Secretary to the Council's Nuclear Physics Board and later Head of the Council Secretariat. He became Secretary to the British Association

for the Advancement of Science in 1970, a position he held until his retirement in 1972.

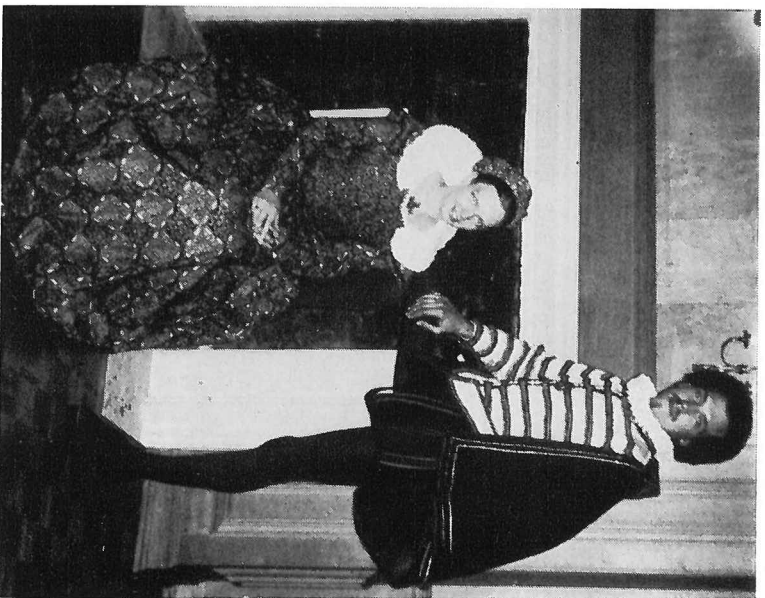
Perhaps the most fitting epitaph to this most gentle of men was spoken by an old colleague who on hearing the sad news referred to John Willis as 'a scholar and a gentleman'.

The Dancing English

The "Nonsuch" dancers made a gracious and impressive entrance to the Ballroom (Long Gallery) of Hermonieux Castle on the evening of 30 August on the occasion of a Country Dance to celebrate the Tercentenary of the Royal Greenwich Observatory. Dressed in Elizabethan costume, they portrayed the style of social behaviour of the period as well as the styles of dress and dance. A reader set the scene and added tremendous atmosphere by giving some historical background to the dancing and reading short excerpts from contemporary sources, from which we learned that our forbears in Elizabethan times had earned the epithet 'the dancing English'. Musica Antiqua completed the scene by accompanying the dancers on replicas of instruments then in current use. During the displays of court and country dances the newly decorated Ballroom seemed to recapture its more illustrious past, providing a perfect setting for this backward glance to a more elegant age.

Queen Elizabeth I was an enthusiastic dancer and evidently took great delight in the more lively dances such as the Galliard and La Volta. She confounded the many critics of La Volta by dancing it at her court after they had denounced it as bold and indecent. La Volta had originated as a folk-dance from Provence, and as a court dance it was unique in that the couple were constantly in close embrace, the man putting his arm round the woman's waist as they both leapt into the air together. A picture at Penhurst Place is reputed to show Queen Elizabeth dancing La Volta with Robert Dudley, Earl of Leicester. Nonsuch performed the Galliard and La Volta to a spellbound assembly.

Charles II, founder of the Royal



Two of the "Nonsuch" dancers in the Long Gallery Hermonieux Castle

Observatory, was also a keen dancer, in an age when dancing was still an essential accomplishment of a gentleman on the same footing as riding. It was therefore of particular interest to watch Nonsuch perform the country dance 'Cuckolds All Awry' (nowadays usually called 'Hey, Boys, Up Go We'), which Samuel Pepys tells us the King called for at a New Year's Eve Ball at White Hall in 1662 and referred to as 'the old dance of England'.

The striking feature of Nonsuch's dancing is the graceful fluidity of movement, each figure progressing smoothly into the next and giving a feeling of continuity rather than an impression of a series of figures put together. No doubt it was this feature which marked the difference between the style of dancing at court and in the villages. The general dancing later in the evening, to the accompaniment of the local 'Magham Ranters', included some of the displayed country dances in the versions currently performed by the 'folk', revealing differences in some of the figures which probably stem from this difference in style.

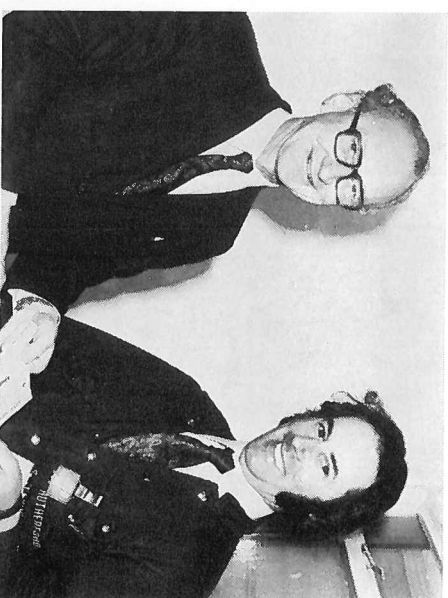
Naturally, 'Greenwich Park' had a place in the programme and was preceded by a folk song to the same tune called 'Come Sweet Lass', sung by Fred Watson of H.M. Nautical Almanac Office to his own guitar accompaniment. It was a very memorable evening, greatly enjoyed by all who took part.

Celia V Hewerdine

Rare bones for BM
The fossilised bones discovered last spring under the British Rail Works' foundry, Swindon are being transferred to the British Museum. The bones, which are between 130 million and 150 million years old, are the remains of a 30ft Pliosaurus Brachypondylus, a rare amphibious reptile. They are said to provide the most complete specimen ever found in this country.

A winning suggestion
Norman Goddard of the Nimrod Division, Rutherford Lab, has been presented with a cheque for £500 by the Director, Dr G H Stafford, for his money-saving suggestion. The suggestion concerned a method of modifying the bases used for quadrupole magnets so that the Type 2 base could be used in place of Type 1 and also that future orders should be of the dual purpose type. As usual, the most significant advances and breakthroughs are those which hindsight shows to be the most simple and relevant suggestions—but it always takes a clear mind to see where these developments are possible. When Dr Stafford made the presentation he

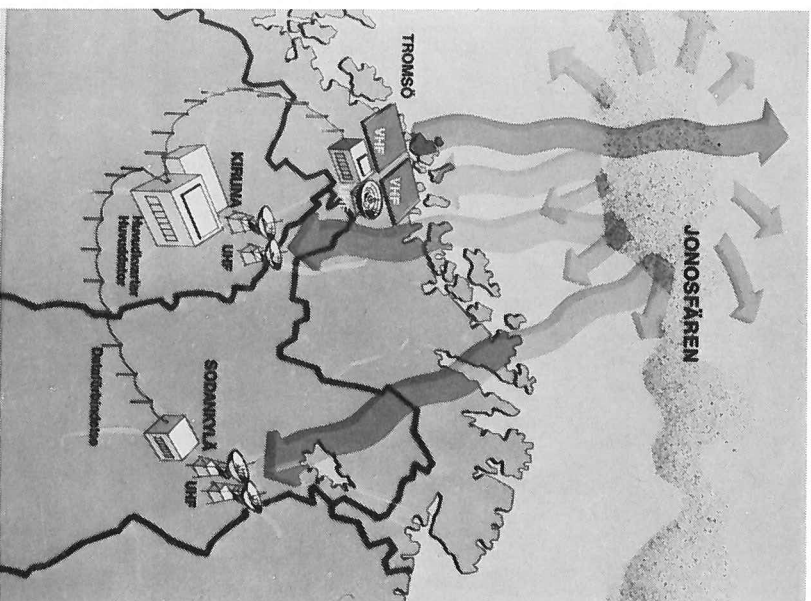
Dr G H Stafford (left) presents Norman Goddard with a cheque for £500



pointed out that this was the ninth Suggestions Award made to Norman Goddard in the past four years and

he stressed the importance to the Lab of such money-saving suggestions.

EISCAT



The picture is from the Swedish research magazine Forskning och Framsteg 4/75

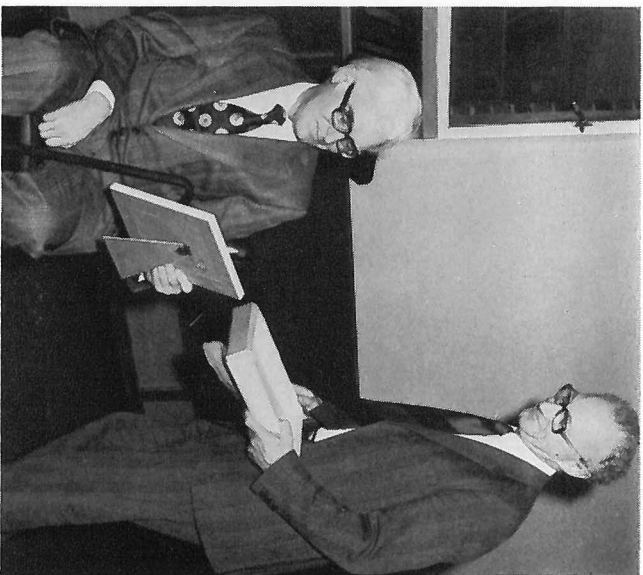
schematic. Computers at the three observatories will be connected by a permanent telephone line, the EISCAT HQ and main computer being at Kiruna. The EISCAT facility should be in operation by 1979.

NUTCRACKER 20

"This is our new career planning scheme", said the Establishment Officer. "On these slips of paper I have listed five vacant posts, which I am sure you will find are unequal in every way. I now put them into this hat and invite you to draw them one at a time. When you draw a post, you must either accept it or reject it. If you accept, we stop there. If you reject, it goes back into the hat and you draw again. You can draw up to five times in all; if you have not accepted anything by your fifth go, you must accept whatever post you draw then."

Assuming I know nothing whatsoever about the posts beforehand, except that no two are equally desirable, and assuming I can evaluate them instantly when I draw them, what should I do to give myself the maximum chance of accepting the best post? And what is that chance?

The prize will be awarded to the first correct entry drawn. Please state whether you would prefer a book or record token. The solution will appear in the next issue.



Far left: Lord Bridges admits the portrait of his father, the late Lord Bridges
Near left: Dr Stafford presents Dr Pickavance with a colour print of the portrait

A 'gift' occasion
A final touch was made to the decor of Ruthford's coffee lounge in November when Lord Bridges unveiled a portrait of his father, the late Lord Bridges and first and only chairman of the National Institute for Research in Nuclear Science (NIRNS).

Before the unveiling, Dr G H Stafford, Director, spoke of the opening of Ruthford's new library in 1974 by Dr Gerry Pickavance (the lab's first Director) and of the generous monetary gift he had made on that occasion. The use to which the gift was put had been left to the Lab and the result was the portrait which effectively linked together Dr Pickavance's gift, the Lab and the first chairman of NIRNS.

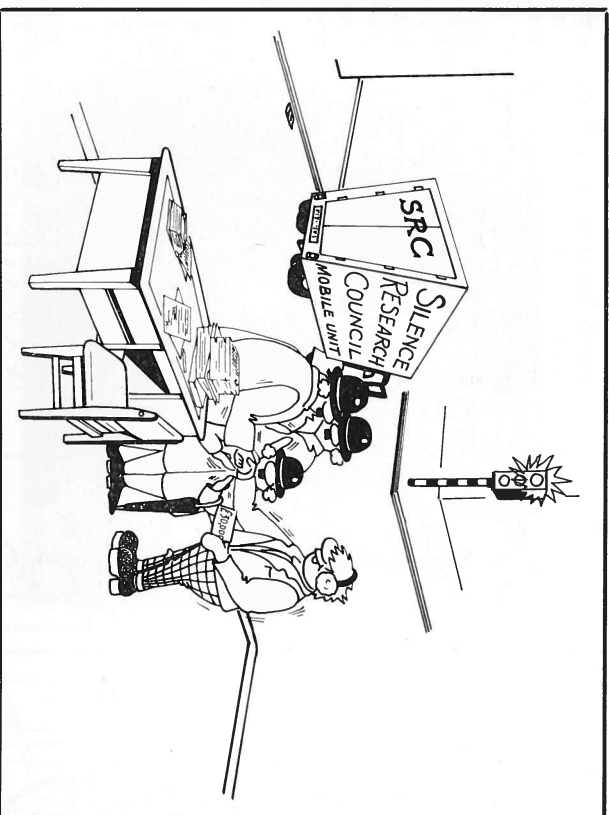


Picture (above right) shows members of the Daresbury Lab Party who visited Warrington Town Hall in December. They were welcomed by the Mayor and Mayoress and then given a guided tour of the building. The original Georgian building has an interesting history. It was designed by James Gibb in 1750 for the Wilson Patten family, and constructed on a

foundation of copper slag from the family's smelting foundry. Copper also played a major part in the construction of the ornamental light fittings and the window frames, and the main gates are made from copper clad wrought iron. The gates were presented to Queen Victoria on the occasion of her sixtieth birthday but she declined the offer. The gates were

then entered for the Crystal Palace exhibition where they won first prize for design and engineering ability. Afterwards they were sold to a local scrap merchant and councillor who presented them to Warrington Council.

* * *



Our cartoonist is Geoff Berry, Publications Officer at Daresbury Laboratory

Silence Research Council

Staff may be interested to see this item about the work of the Council, which appeared in the Newcastle Evening Chronicle on 22 November:

"A young Newcastle scientist whose work helped to gain a unique mobile laboratory for Newcastle Polytechnic, received a degree of Master of Philosophy.

Mr Andy Tomlinson, aged 24, of Cramlington, wrote a thesis on traffic noise at traffic junctions on Tyneside.

The work so impressed the Silence Research Council that it provided a £30,000 grant for Mr Tomlinson and his colleagues to continue the project.

The money has been used to buy and equip a mobile acoustic laboratory which is now used by the acoustics group in the Polytechnic's Department of Physics and Physical Electronics to carry out research.

The group leader, Mr Brian Oakes, a senior lecturer, said: "This is a most useful unit. It will allow us to make prolonged and extensive studies of noise problems that plague towns and cities."

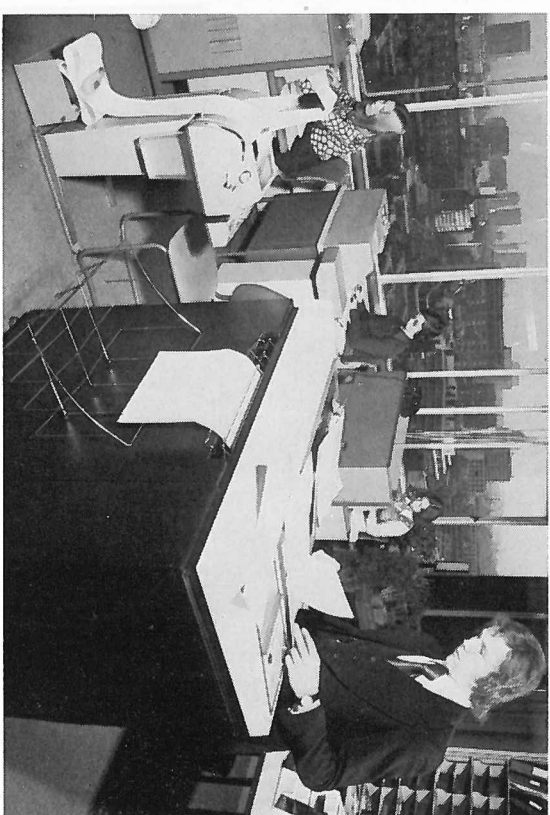
* * *

Transaction forms and claims are received in the Data Processing and Control Unit at State House from the registries, committee secretariats and institutions. They are sorted into batches and the information punched on to computer input cards. This information is verified. The cards are then run through the card reader of a CTL Satellite I terminal which transmits the information to Atlas over a Post Office data link.

Once the transactions have been processed by the computer, a variety of "update reports" are produced by the terminal listing various details held on the computer records. Data can be extracted to produce lists and analyses for committee and management purposes. Payable orders are also produced from the system to be posted to Institutions in settlement of claims.

The use of the Atlas computer will be further extended in the new year when it will be used to assist in the administration of SRC studentship awards.

A Lewis

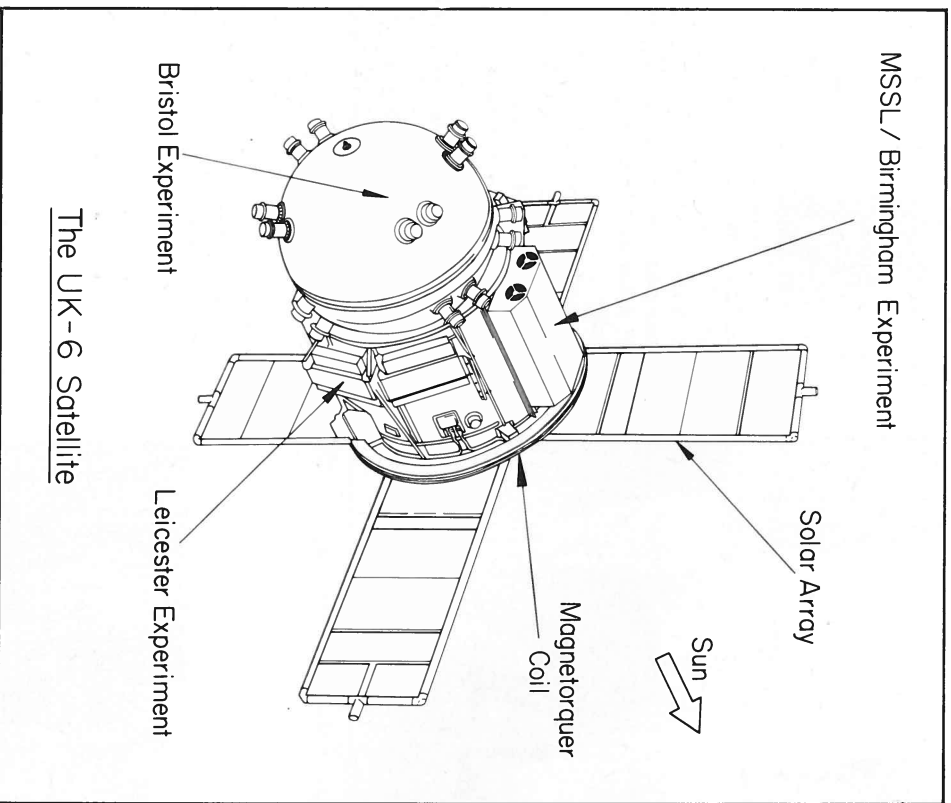


Picture shows from left to right, computer staff: Lynn Nash; Sheila Coleman, Pauline Field; and Tony Rooker

Data Processing at State House

The ICL 1906A computer at Atlas Computer Division is now being used to assist in the administration of research grants awarded to Universities, Polytechnics etc. Proposals for the system were presented in March 1972. After testing, instruction manuals

were prepared and formal training sessions were instituted. Clerical records were then converted to the computer system and the two systems ran satisfactorily in parallel for four months until the new system of administration became fully operational in April this year.



The UK-6 Satellite

UK 6
UK 6 or Ariel 6 after launching is scheduled for launch during 1977 by a NASA Scout rocket from Wallops Island, Virginia. It will be a small spin-stabilised satellite carrying a cosmic ray experiment and two x-ray experiments, and is to be launched into a nominal 550 km circular 55° inclination orbit.

The cosmic ray experiment will be provided by Bristol University (Professor P H Fowler FRs) and has been designed to study the ultra-heavy component of the cosmic radiation, using a spherical gas scintillation/Cerenkov detector mounted on top of the space craft's main body structure.

resolution in the energy range 1 to 50 keV by means of four gas-filled thin window proportional counters. The field of view will be determined by a collimator assembly and the view axis will be aligned to the spacecraft spin axis.

UK 6 will be managed by the Appleton Laboratory, and the present Ariel 5 control centre adjusted to meet the requirements of the new satellite.

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Solution to Maxim 10

A L E W I S F L O T T A F
N A V A L C A B S H E B A
G T I G O R M A T B R E R
L E N S I O A O R A N T N
E X C O M U N I C A T E
S C E R S E S E C K R E F
E L L A C R A S H T Y R O
Y E A M H A T L A O S S U
L A C K A D A T S T C A L
U V O L T I M M D C O R N
M E N E T A M T I L T G E
D R I V E L O O C O C O S
Y I S C T L L Y W I G H T S

The winner was Jim Irvine (ROE) who wins a £2 book token.

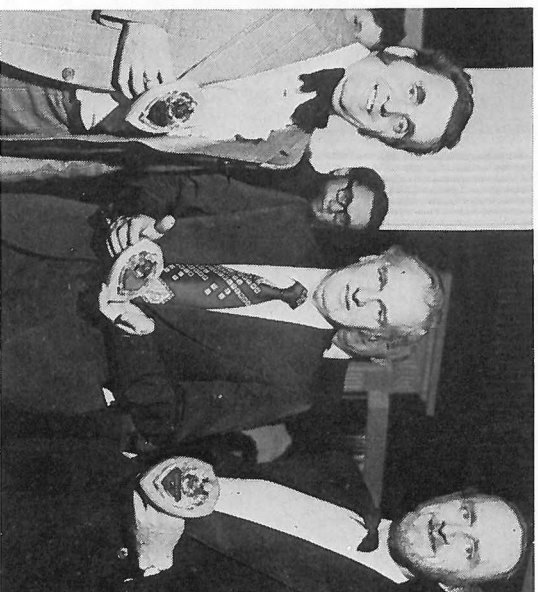
Breton Tunnyman

Those who go down to the sea— will be interested to hear that Charles Booth (Rutherford Lab) and friend have acquired a large sailing boat, 70 ft long, 21 ft beam, tonnage 40 net. Charles, who holds a master navigators certificate, DTI and lectures for Oxford educational authority up to highest RYA ocean standard plans wide programme of activities including cruising under sail, sea angling and aqualing diving. Those interested in further details should make early contact with Charles, preferably by writing to building R2 at the Lab.

Swindon Office celebrates

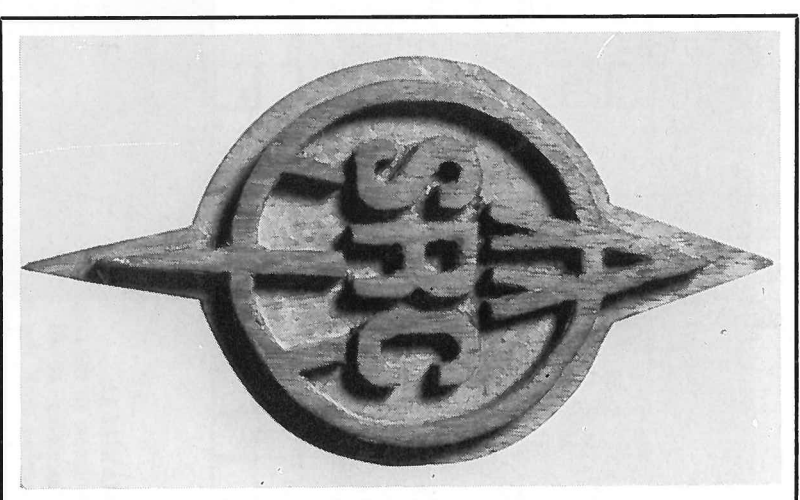


From left to right: Paul Samath, Secretary of the Swindon Sports and Social Club and Mr & Mrs St J Walker, guests of honour. Mrs Walker kindly presented the trophies to the winners of the Winter Indoor Tournament



Winners of the Darts Trebles From left to right: Jock Caldwell, Bill Pitman and Dennis Rose

Swindon Sports and Social Club held its annual dinner and dance on Friday 12 December 1975. Guests of honour were Mr R St J Walker, Secretary of the Council and Mrs Walker. One hundred and ninety six guests danced to the music of the Swinging Shepherds and highlight of the evening was the presentation of trophies to the winners of the Winter Indoor Tournament.



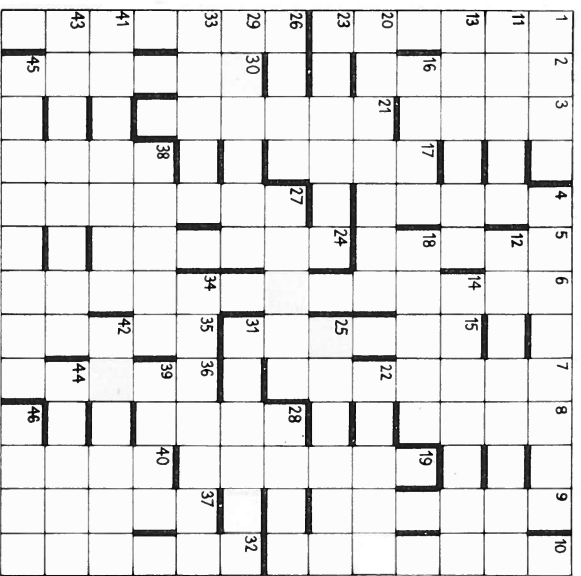
"There are those who take the view that only the use of chisels, gouges, rippers and other hand tools represents true wood carving and who disapprove of the employment of power tools.

The carving above represents a mixture of techniques but for anyone wishing to embark on the fascinating hobby of wood carving the possibilities are endless. For amusement, or wonderment, look out for misericords in, say, St George's Chapel Windsor, or at cathedral stalls or screens, or many of the sculpture exhibitions.

Almost any piece of wood, is likely to be suitable for making something pleasing, the final configuration not necessarily being dependent on either the graining or the texture of the wood—all that is required is imagination, some patience, initially a few sharp tools and a piece of wood—you may be a Hepworth or Moore in the making.

Whether you whittle wood or do figure, portrait, relief or abstract work, is entirely up to you; as is the wood you use, your inclinations and the effort you are prepared to make."

A Dobbins, Swindon Office



MAXIM 11

MAXIM 11
Answers to the clues asterisked need shortening to fit the diagram. In keeping with the nature of the required surgery, this operation could be called "uration".

- Clues**
- ACROSS**
- *1. Used to kick fish—how trivial! (8)
 - 4. Do pleats, when knitted, show shape of jumpers to come? (8)
 - 11. I judge 5 (5)
 - 12. What makes you feel lousy and upsets negro—it's fresh air, mostly (8)
 - *13. Quietly undo, undone in journey hither: putting together again (11)
 - 14. Lean drunkenly with DT's, leaning one way (7)
 - 16. He was well qualified in Roman erotica (4)
 - *18. Grovel cunningly, clutching cash—disgusting! (9)
 - 20. Sonny, my new name's the same (7)
 - 22. It's inherent to making a person open his mouth wide (5)
 - *23. Cite green as an example of having "go" (9)
 - 25. Live next to town on the A10? Look out! (6)
 - 26. Food-flavouring often found at mayoral tabbles (4)

- 27. Start permutation with zeros and get pounds in this competition (5)
- 28. Did some walking is doubly shorter than did some striding (4)
- 29. East German the French take for a stable-hand (6)
- 31. Way out, way out, co-exit (6)
- 33. Indian Tribe loses one Hot-Foot (5)
- 34. Notice in cemetery: tip rubbish in disorderly heap (7)
- 38. Southend's first source of water was the waves (5)
- 39. It's very large, London Office, in the capital (4)
- 41. I'm in it—I always am in it (7)
- 42. All hot and messy, following Blair in Scotland and Queens-land (6)
- 43. Feminine teeny-bopper's age is just above that of the majority (8)
- 44. To be abhorrent to a f-friend (5)
- 45. Joints where airmen go (8)
- 46. A million million is a hell of a rate (4)

- 3. Identify the variance of the mean (4)
- 4. No way of stopping upward cutting saw (5)
- 5. One grey, one missing, in a state that can induce whiteness (5)
- 6. No guts? Such dreadful weeds I'll demob! (13)
- 7. Gore's an epitome for one branch of this family (7)
- 8. Describes soldiers' opinion of spell on guard (4)
- 9. Member of vocal group—and *Quest* reader? (6)
- 10. Put up with the final rude muddle (7)
- 15. Half-lies in a position to make you vulnerable (6)
- 17. Tore madly into psittacine learning method (4)
- 19. In Greece a part's recognised as providing the simple life (6)
- 21. Did gods canter, running amock, after downing this? (6)
- 24. Part of ocular disc (or nearly!) (6)
- *26. Corrina or MG might be seen doing this (6,6)
- 27. Birds that get cooked in pie and stew (7)
- 28. Computes the cost of having children (4)
- 30. Advice to disc jockey who has lost his thread? (4,2)
- *32. Provider of fur, where you might take it, catching a cold with one (10)
- 35. Flat method of approach to runways (5)
- 36. Jots down one-nil, sat up afterwards (5)
- 37. Bear here? Yes. Bare here? It's not advisable (5)
- 38. Cuddles up in dance (4)
- 40. A long sort of walk—look, taking exercise! (4)

- DOWN**
- *1. Like a fighter, signal for end of round one, gets cross with me losing every other one (9)
 - 2. What is hard but ends happily? Gentle sarcasm (5)

The prize will be awarded to the first correct entry drawn. Please state whether you would prefer a book or record token. The solution will appear in the next issue.

London area hockey tournament

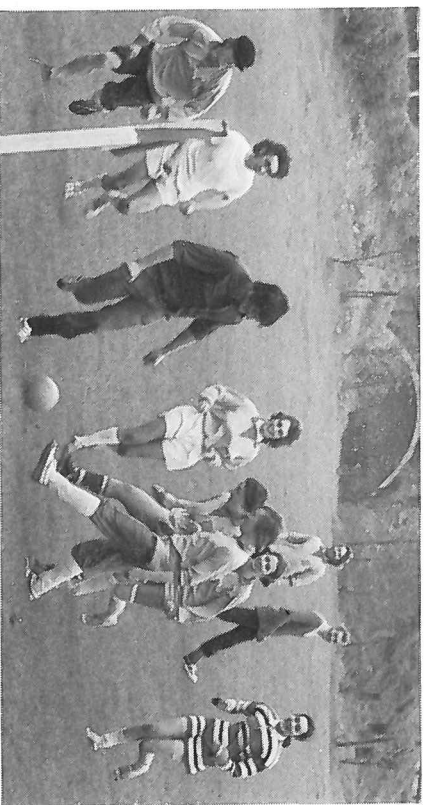
What's this? Civil Service London Area Indoor Mixed six-a-side Hockey Tournament—well, there's Janet Simpson from LOA, Janet Mannfield from ASR Division, John Parsons from E & O and myself from Finance all playing club hockey, I wondered if there was anyone else? Yes, we found two more players "resting": Mike Patterson from Engineering Division and Paul Gilbert from Public Relations Unit. That really does make a side to represent London Office! Unfortunately we could not find players from Science and NP Divisions to make the full team of eight—two substitutes were allowed.

Wednesday, 4 February found us joining the rush hour bus queues for Waterloo and beyond to get to Manor Place Baths for the preliminary rounds of the contest. Top two sides to reach the finals—well, when one of the team sat down in the bus on seats reserved "for the elderly, handicapped or pregnant ladies" I did not think much of our chances! Then the first game against Inland Revenue—we had not practised together before, some of us had not played indoor hockey before and this was the strongest side we were to play—so, we lost 5—1, although it was only 3—1 till the last 90 seconds. Then, across the road to the pub where we chatted with the tournament organiser and had a liquid supper before being extracted to play the second game against NPL. Gin and beer obviously are good for hockey, we only lost 2—1 and could have won or drawn. The third game against MOD was much harder and we were tired but we defended desperately to lose only 3—0. Janet Simpson scored both the goals and I let in 10. All right we came bottom but thoroughly enjoyed ourselves and we are entering next year—any more hockey players around?

Graham Tidmarsh

Solution to Nutcracker 19

The solution was 143. The winner was C S Biddlecombe (RL) who wins a £2 record token.



Daresbury Ladies' soccer team in action



Father Christmas presides over contented youngsters at Children's Christmas Party, Appleton Lab

Farewell

As a result of Rutherford and Atlas merger, we regretfully say farewell to Doug House, local correspondent at Atlas. Our thanks go to him for his enthusiasm, ideas and the hard work he did for 'Quest'. (Harry Norris will now cover both Rutherford and Atlas and can be contacted on ext. 484 at RL).

Welcome

Adrian Dent will be Quest's new local correspondent for the Swindon office.