

Bulletin

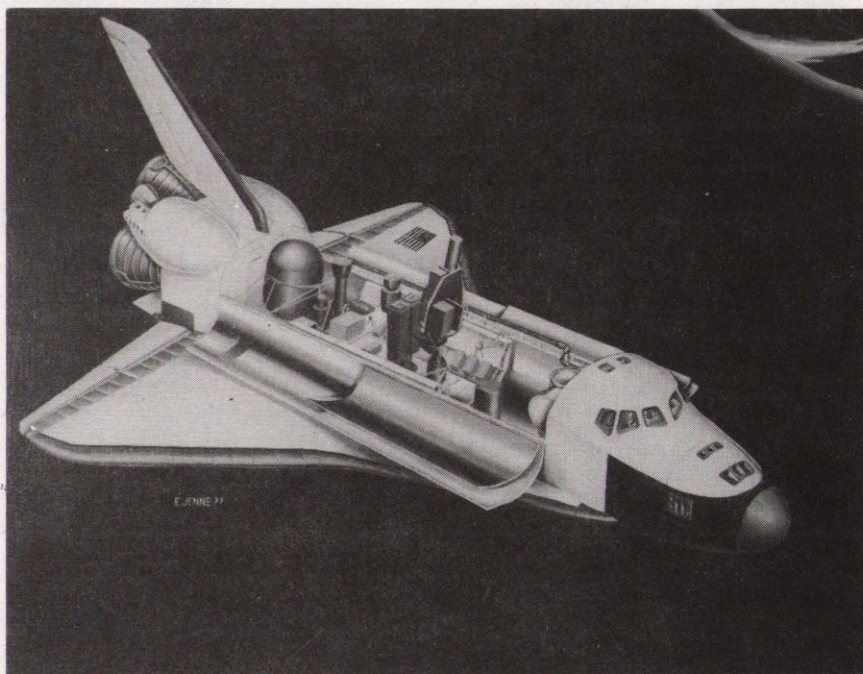
of the Rutherford and Appleton Laboratories 8 Sept. 1980 No. 12

'Space & Astrophysics' Come to Chilton

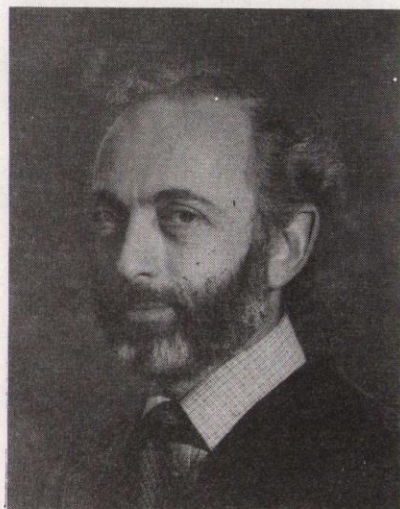
The main contingent of the Space and Astrophysics Division of Appleton Laboratory moved on-site during July-August to occupy the new extension to R25. Bulletin readers will no doubt be interested to learn a little of the interests and activities of the new arrivals.

The People

Head of the Division is Dr Alan Gabriel. He leads a team of approximately 100 engineers, programmers, scientists and technicians supporting UK space science. The Division is divided into 3 groups. The first of these is the *Projects Group* under Mr Peter Barker - concerned with the management of UK space astronomy missions, assessing the feasibility and preparing support material for proposed missions, and designing, constructing, integrating, and testing instruments to be launched into space. The *Satellite Control and Data Processing Group*, lead by Dr Barry Martin, provides ground support facilities for space science missions and the



An artists impression of the shuttle in orbit. Space and Astrophysics Division is involved in several collaborative space experiments for eventual launch on this multi-mission vehicle.



Dr Alan Gabriel, Head of Space and Astrophysics PC 4399/6

computing capability for data acquisition, processing and distribution. Part of this group moved to Chilton six months ahead of the rest of the Division to set-up the ground-station for the Infrared Astronomical Satellite (IRAS), the Division's principal commitment at the present time. Finally there is the *Astrophysics Group* (previously the Astrophysics Research Division, ARD, at Culham) under Dr David Clark, which provides the research support for the other two groups while pursuing collaborative research programmes with UK university groups in the fields of solar physics, cosmic space astronomy, and laboratory astrophysics. The three groups within the Division can be seen to be defining the three essential components

of major space programmes - namely the engineering capability to build space instrumentation of exceptional precision and reliability, the technical and computing effort to provide ground-station control of spacecraft and process the vast quantities of information they require, and a support research commitment.

The Projects

As previously mentioned, IRAS is currently the Divisions main project. Readers will have seen the 12-metre diameter satellite-tracing antenna south of the restaurant. When IRAS is launched in 1982, the Chilton ground-station will have sole control of the satellite and handle the

'Space' at Chilton continued

initial processing of all the scientific data it receives. This will be passed to US, UK, and Dutch astronomers preparing the first full survey of the infrared sky. Much of the expertise now being used for IRAS was acquired during the Division's major support role for the highly-successful UK5 satellite which studied X-ray emissions from space. The Projects and Astrophysics Groups have had considerable experience and success in building space instrumentation in collaboration with UK university groups. These experiments have been supported by an active laboratory research effort.

With NASA

The Division currently has a major collaborative experiment on NASA's Solar Maximum Mission Satellite, and is building experiments to be flown on "Spacelab", orbiting on the "Shuttle" - NASA's multi-mission launch vehicle which represents a new approach to space research. Major studies are being under-taken by the Division on UK and European space projects, and an important contract has been awarded for software development for the Space Telescope. New engineering and computing facilities will be provided at Chilton to make it a recognised major Space Centre.

Exciting Science

Space research remains an exciting and challenging forefront science discipline. The new Division at Chilton hopes to share some of this excitement with colleagues in other divisions, and seek their collaboration in meeting the challenges space research presents.

We thank Dave Clark for this introduction to the personalities and work of his Division.

Death Benefit Scheme

DID YOU KNOW that the Laboratory operates a fund to provide an immediate cash payment to your nominee without fuss or formality, should you die? At present the benefit amounts to £75. Larger membership of the scheme would of course mean higher benefit.

WHY NOT JOIN? It costs only 60p to join, and because the finances are healthy, subscriptions are currently suspended. If it should prove necessary to re-introduce regular subscriptions, they would be 10p per month or 2p per week.

Further details can be obtained from:
Mr A Forster R6
Mr J Rodbourne R56
Mr D Taylor R40
Mrs S Fones - Sec/Treas. - R20

Electronic Materials Information Service - EMIS

This information service is being offered by the Information Service of the Institution of Electrical Engineers (INSPEC) and will be demonstrated at 1400 hrs on Wednesday 27 August in the Atlas Centre Colloquium, R27 following a short talk.

EMIS provides researchers in solid state physical electronics with both continuously updated text/data on all properties of electronic materials and supply source information giving details on where to obtain them. Property information is given for selected materials (Si, III-V semiconductors, LiNbO₃, quartz - to be expanded). Supplier details are presented for all research and device materials. Note that the supply information facility is not yet available.

In addition to its fact retrieval function, EMIS serves as an advance publication medium for new data on all properties of all electronic materials.

The service is interrogated via a teletype terminal connected to the telephone. The user gets his information printed out on the spot by keying in codes for the subject area of interest. These codes (eg MP for melting point, SI for silicon) are derived from a codebook or a continuously updated online version of this.

Whenever a user chooses to log off he is automatically invited to enter comments or queries online. These user messages are examined daily by the database producers; and a reply is mailed to the user where appropriate although it is envisaged that eventually replies will be made electronically.

In future, more facilities (eg continuously updated text on materials processing techniques will be introduced with the aim of improving the efficiency of electronic materials R & D.

For further information please contact Kate Crennell, Ext. 6397.

Road Safety in Fermi Ave.

ALRE have commented on the increasing tendency for cars to stop in Fermi Avenue near our Main Gate Lodge to allow passengers for The Laboratories to alight or to be picked-up. The practice causes congestion and dangerous situations for other traffic along Fermi Avenue.

It would be helpful if passengers of vehicles who wish to be dropped-off or picked-up at the Main Gate Lodge advised their drivers that these operations should only be carried out in the appropriate external vehicle parks, and not in Fermi Avenue.

Obituary

We regret to learn of the death on 4 July of Mr A C Gordon-Smith. His retirement eight years ago marked the completion of a career in physics which lasted well over forty years.

Gus Gordon-Smith brought to his work a combination of insight and painstaking experimental skills. This was never more evident than in 1946, when in partnership with L Essen, they used microwave methods to measure the velocity of light to a new degree of accuracy; a result still quoted in Kaye and Laby.

An outstanding bridge and tennis player he was a sportsman in the best sense of the word. His old colleagues at Ditton Park offer their deepest sympathies to his wife Kitty.

Suggestions Awards

The following awards were approved at a meeting of the Local Suggestions Awards Committee held on 17 June 1980:-

Mrs E G Landy	Admin	£5
Mr J Akhurst	EBW	£5
Mr H Webb	INST	£5
Mr P J Champ	SNS	£10
Mr P J Champ	SNS	£10
Mr E A Cox	SNS	£25
Mr G Doman	SNS	£10
Mr W H Dormer	SNS	£30
Mr N Goddard	SNS	£15
Mr D Morgans	SNS	£10
Mr J Pattinson	SNS	£30
Mr A Smith)	SNS	£75
Mr M Krendler)	SNS	
Mr M Krendler	SNS	£15
Mr S Sunderland	SNS	£10
Mr S Sunderland	SNS	£5

New Publications

The following publications are now available:

Rutherford Laboratory 1979
NIMROD - The 7GeV Proton Synchrotron

If you wish to receive a copy please contact the Main Library, Chilton Site, Ext 384.

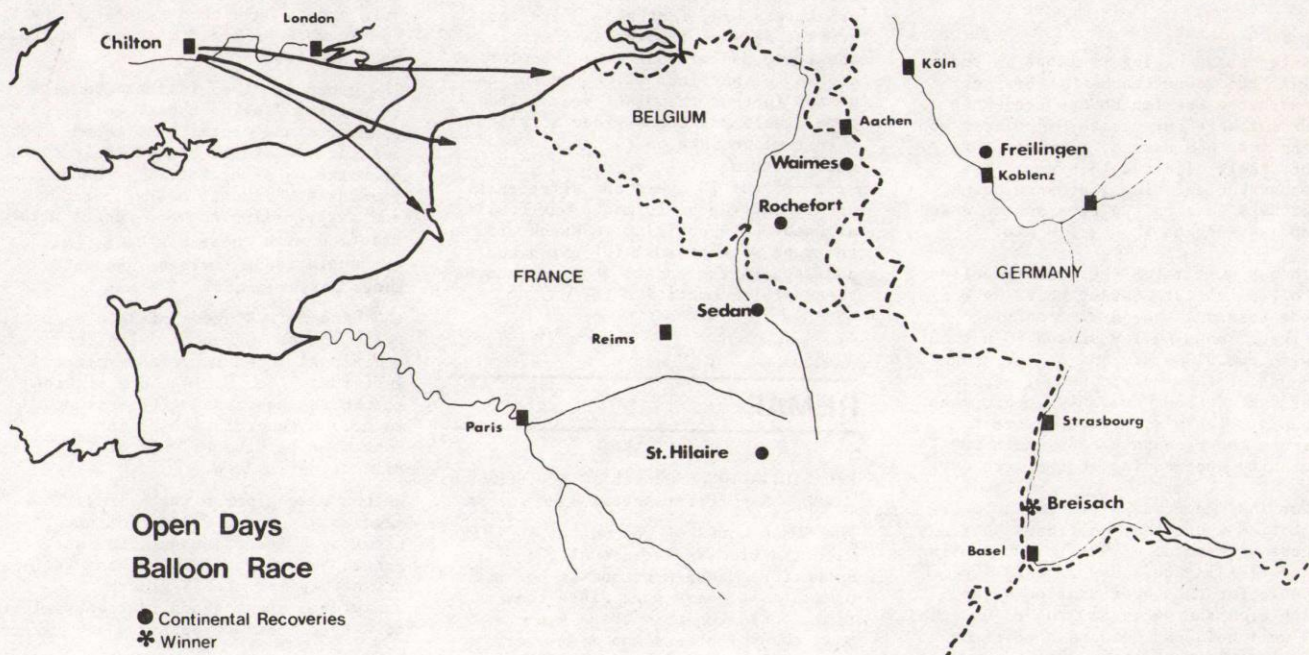
Training

LOUGHBOROUGH UNIV. OF TECHNOLOGY

One week lecture/workshop Courses.

22-26 Sept: "Microprocessors -
3-7 Nov: Introductory Course"
15-19 Dec:

The Great Balloon Race



Open Days Balloon Race

- Continental Recoveries
- * Winner

Five hundred miles, was the estimated distance travelled by the winning balloon, in the "Families Day Balloon Race". The winner was C ASHLEY of CARTERTON who receives a prize of £10.

Of the Balloons, all released on Saturday afternoon of 'Open Days', 30 were picked up in a broadening band

across S.E. England from Chilton to Dartford and Benenden in Kent. Continental recoveries came from Rochefort and Waimies in Belgium, St Hilaire Cottes and Sedan in France, Freilingen in Germany - and the winning balloon from Breisach am Rhein Germany, recovered on 13 July, the day after it was released.

All profit from enteries to the race are to be donated on behalf of the Laboratories to the RNLI.

The longest distance travelled by a balloon, that your editor can trace, appears to be the 1,200 miles covered by a balloon released at Grantham Football Ground in 1971 which ended up in Skelleftea in northern Sweden.

Goodbye to

Lynn Orlando

After five years of nursing the 'boys' of Neutron Division, Lynn has decided that an infant of her own would be less trouble.

So, on Thursday 21 August, Lynn said her farewells at a friendly little ceremony presided over by Harold Wroe. Presents of perfume, flowers and a gold dragonfly pendant were showered upon her, together with many good wishes, and not a few scurrilous remarks.

We will miss her, and she says, she will miss us - but there's always the Christmas bowls competition.

All the best Lynn - and Thanks.

Frank Bale

In spite of our trying to talk him out of it, Frank Bale decided to retire prematurely from the Appleton

staff to pursue interests outside electronics which he has been building up for some time. For the past 30 years or so he has been developing special radio apparatus of all kinds, much of it for the Chilbolton Observatory. His expertise will be sorely missed, together with his advice and help given freely as the head of the Measurements Laboratory at Ditton Park. Frank could also be relied upon to provide candid opinions on matters not entirely connected with electronics, and his occasional letters to editors of both technical and non-technical journals, in which he pointed out the errors of their ways, always made entertaining reading.

On Wednesday 16 July Director(Appleton) presented him with a "Teasmade" together with the best wishes of the staff for a happy retirement. Amongst other things, we all expect he will pursue his hobby of piano-playing and accompaniment, and hope that he will not move so far away that we do not continue to see him-even at Chilton!

Missing

Electronic Calculator Casio AL-10 is missing from Room 101, R18 will anyone knowing of its whereabouts please contact RW Harrington Ext 337

Film Badge Notice

Period 10 - colour strip BLUE commences Monday 8 September. Please change your films promptly and return all old ones.

Sales to Employees

Sales of scrap metal/plastics as set out in RLN 12/73 will be made on 12 and 26 September at the scrap compound rear of R40 from 12.00-12.30

Cricket Round-Up

After the exciting finishes in the last two Downs League Matches, yet another close finish occurred when Didcot were our visitors. Didcot won the toss and batted, scoring 71 for 7 off their allotted 15 overs. The Laboratories' side lost some quick wickets chasing the runs and we ended up just 3 runs short of a win.

In our next match the team travelled to Plenty's at Newbury where we won the toss and scored 87-5, batting first. John Culley scored 40 not out with two BIG sixes out of the ground - one of them over a house, garden, greenhouse and caravan!! an enormous shot. Plenty's, however, were to score the necessary runs, again the winning shot coming in the last over.

Our last game was with Didcot Power Station where some confident batting gave us a total of 93-7. Our bowling and fielding this day reached its peak, for the Power Station never achieved the necessary run rate. 4 well held catches and some tight bowling kept the batsmen tied down and they lost their wickets trying to hit out and ended their 15 overs 69-9. So we finished in third place in the League and enjoyed our best season yet.

We had hopes of doing well in the Downs League Knock Out Cup - however still smarting from their defeat by us earlier in the season, Peasemore were in no mood to allow us much progress. Peasemore scored 70-9 with Ray Smith getting 28 off his "employers". The Laboratories' batting was dreadful and we could only manage 42 runs from some tidy bowling.

The AERE Evening League side has enjoyed a very good season. Continuing with their good results in the match against Chem.Tech. we had a comfortable win. Chem.Tech 66-9. Our early batsman knocked off the runs in just 11 overs, Jay Namayakkara 26 not out, Jim Denley 25 not out, in control.

Against the Firemen we enjoyed our highest score of 121-6, our batsmen in cavalier style against some easier bowling. Reg Jones 39 and that man Denley again with 45 not out getting the runs. The Firemen could only manage 50-6; we used 10 bowlers in this game which put us through to the semi-final against Atlas. We expected some stiff opposition but unfortunately the Atlas side was depleted of some of its star players and so they were well below strength. Atlas batting first scored 42-5. Our opening batsman Reg Jones 25 not out and

Nick Myer 20 not out, knocked off the runs in this sadly one-sided affair. That's what happens when you let your cricketers play football during the cricket season, they break their legs! and leave you without a fast bowler. And so to the final which was for us a step further than last year. The game itself was a one-sided affair but this time we were on the receiving end. Batting first we scored just 42-9 off our 18 overs and after this dreary batting performance our bowling allowed the opposition to knock off the runs without loss in just 5 overs, a disappointing end to what was another successful competition for us.

REMAP

REHABILITATION ENGINEERING ADVISORY
PANEL - Report for August 1980

The REMAP workshop was set up in 1976 with the kind assistance of the Rutherford Management and it has been used almost every week since that time. Unfortunately there are now only two volunteers who meet every Tuesday and more help is urgently required.

Currently, useful articles are being produced for patients who are recuperating from major crises, eg amputations or strokes. These items assist in rehabilitation training and range from transparent trays for wheelchairs to folding kneelers and leg stump supports. There is a constant demand for such items which are not available through the National Health Service but which, nevertheless, greatly assist the well-being and happiness of people in distress. Most items are made from wood and the skills required for fabrication are minimal. Further details are obtainable from A C PETERS or P D HEY

Music Club

As with other indoor activities the music club has been without a regular venue for many months. Despite this a faithful few have continued and kept the music club alive meeting at lunchtime in conference rooms where these were available. Once the new centre was in commission interest and activity has revived.

Most active are the clarinets comprising two groups: Beginners i.e. aspiring musicians with enthusiasm if less experience who work on simpler pieces. There is a more

advanced group currently working on a delightful series of quartets by Mozart (K170 to K 174). Progress in both groups have been fantastic thanks to the work of Sid Broughton who leads both groups.

The group of mixed instrumentalists comprising violins oboes, cellos clarinets and flutes also meets regularly. There is a good collection of works by Bach, Corelli, Handel Vivaldi and others in that period and a sprinkling of more recent works. Practice with these has been rewarded by considerable improvements in their performance.

The Hand Bell Ringers plan to meet again in the autumn and with the additional hoped for interest from individual Rec. Soc members wishing to use the Music Room it is proposed to hold a general meeting in September to discuss ways of fairly allocating its use.

We now have a piano installed, regularly tuned and kept in good order by a Staff member (PLD. so that should be alright!). Thus the facility now exists for choral groups, individual singers and instrumentalists to extend their repertoire - any takers?

Bulletin

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Deadline for insertions: Tues. 9 Sept.
