

Bulletin

of the Rutherford Appleton Laboratory

8 Sept 1982 No 13

JEAN BARRORD
R20

P.M. sees UA1 at CERN

On Thursday 12 August Mrs Margaret Thatcher paid a private visit to the Meyrin site at CERN and as part of her itinerary visited the UA1 experiment in which RAL is a participant.

The Prime Minister and her husband Mr Denis Thatcher, who were on holiday in Switzerland, were welcomed by Professor Herwig Schopper, Director General of CERN and by members of the management. Mrs Thatcher was thus able to get first-hand information on present and future activities of the largest European particle physics laboratory.

Dr Alan Astbury of RAL gave a short introduction to the UA1 proton-antiproton collider experiment which studies collisions at the highest accelerator energies achieved so far and which hopes to discover the W bosons. The Prime Minister also toured the experimental apparatus, which is located in a deep underground cavern near the Swiss village of Meyrin.

Mrs Thatcher also saw the technology being developed for the LEP project, a large electron positron collider which was approved last autumn by CERN's Member States. She visited a mock-up of the components and tunnel which will stretch round a ring of 27 kilometre circumference under the Franco-Swiss frontier. British physicists figure prominently in the proposed programme for this new accelerator.



Professor Peter Kalmus, Dr Alan Astbury, the Prime Minister and Professor Herwig Schopper.

(Photo - CERN.)



Inside the internal detection apparatus of the UA1 detector, Alan Astbury (left) explains the experiment to Mrs Thatcher, Mr Thatcher and Mr W Rickett (Private Secretary).

UK HEP Forum

The next UK High Energy Physics forum will be held on Saturday and Sunday 23 & 24 October 1982 at the Cosener's House, Abingdon. The talks to be given will cover the subject "Spectroscopy Old and New".

Anyone wishing to attend this meeting, designed to encourage informed contact ^{al} between UK theoretical and experimental physicists working in the field, should write to Dr Edwin Handcock at RAL before 24 September.

INTERNAL Events

HEP TECHNIQUES SEMINARS R61 CONF RM - 1400 hrs

15 Sept Dr Egbert Belan
"A High Resolution Silicon
Detector Telescope to
Measure Short Lived
Particles in Hadronic
Interactions".

HEP SEMINARS R61 CONF RM - 1100 hrs

8 Sept Dr S Matsuda/Kyoto
Title to be announced.
see 'Today' notice.
15 Sept Dr G Kalmus/RAL
"Weak Decays of New
Particles (Paris Conference
talk).
22 Sept Dr R R Horgan/Cambridge
"Stochastic Evolution,
Turbulence and Lattice
Gauge Theories".

NIMROD LECTURES R61 CONF RM - 1400 hrs

6 Sept Dr Martin Green/Manchester
"Calculations of One - and
Two-Loop Feynman Diagrams
using Algebraic Manipulation
Programs".
20 Sept Dr G G Ross/RAL
"Supersymmetry"

Film Badge Notice

It is Period 9, colour strip YELLOW.
Anyone needing a new holder please
contact Jenny Coates, Ext.430.

Next Film Change

Monday, 13 September.

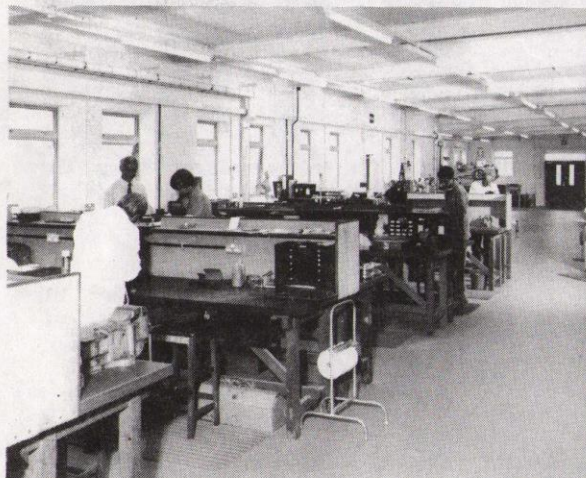
Missing

Would anyone finding two keys on a
key ring, with a blue plastic tag
marked 'Archive Keys', please ring
Jean Banford Ext 484.

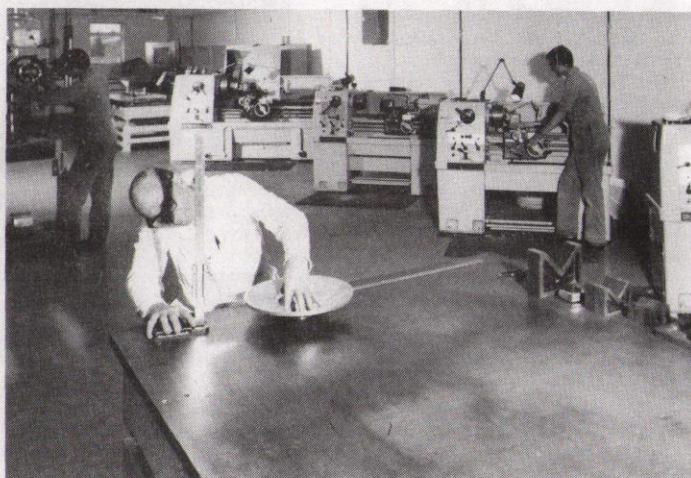
Sales to Employees

The sale of scrap metal and plastics,
as set out in RLN 12/73, will take
place on 3 and 17 September in the
R40 Scrap Compound from 1200 - 1230 hrs.

New Instrumentation Division Workshops



82FC 3692



82FC 3690

Now that the Appleton Laboratory has joined us and extended our range of work we are rationalising our workshop facilities in order to improve the services available for general Laboratory use. A close support workshop for specialist areas has been set up in R25 and the remaining RAL workshops are being re-grouped and updated in the R12 area.

The work will be done in four phases. The new machine shop and fitting area together with a new electrical workshop has just been completed as phase I of the project. (The new mechanical workshop is pictured here). Phases II and III will house a large clean room, an inspection area, a wrapping and scintillation bay, graphite spraying and assembly areas and a welding bay. A new mess-room, locker room and toilet facilities for the 67 Mechanical and Electrical craftsmen and other industrial staff who man the facility, is also incorporated in phase III. At the completion of phase IV, the main workshops will also be moved from R9 to these buildings.

As "business will carry-on as usual" throughout the duration of the whole scheme the logistics of the exercise are formidable but the expectation is that all will progress without too many hiccups to a successful conclusion, early in 1983. (We thank Derek Moore for this news.)

Another First for the FR 80 - Lucky 13

"What is the use of a book", thought Alice, "without pictures or conversations?" (Lewis Carroll - *Alice's Adventures in Wonderland*.)

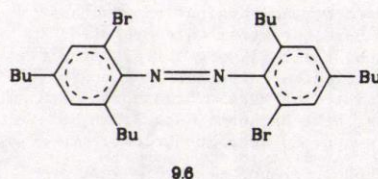
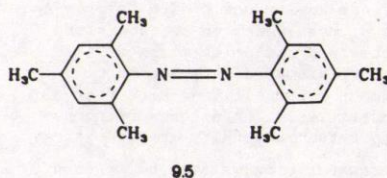
The Cambridge Crystallographic Data Centre agreed with Alice and decided to improve their annual bibliography by adding chemical structure diagrams to it. The bibliographies form a series, 'Molecular Structures and Dimensions; Organic and Organometallic Crystal Structures'. They contain references to crystal structures which have been determined during the past year.

In 1976 the Data Centre approached the Data Compilation Committee of the SRC for assistance with the problems of printing this publication which needs special Greek symbols and many small letters and numbers used as superscripts in chemical formulae. Each volume contains the references sorted in six different ways to enable the reader to quickly find the structures of interest. The FR80 was first used for Volume 8, Bibliography 1975-76 (see *Bulletin* 19 October 1977 'FR80 makes Film of the Book'); and it has been used for all of the subsequent volumes, as well as a cumulative index volume, 'Guide to the Literature 1935-76' also published in 1977. Several years ago, the Data Centre decided that chemists would probably find an index of chemical structure diagrams even more helpful. Structures may contain very similar groups of atoms and this is obvious from a glance at the diagrams although their names and formulae are very different. Most computer typesetters can handle text but not diagrams. The FR80 can handle both, if you know how to instruct it.

Part of main bibliography.

- 9.5 2,2',4,4',6,6' - Hexamethylazobenzene
C₁₈H₂₂N₂
E.J.Gabe, Y.Wang, L.R.C. Barclay, J.M. Dust
Acta Crystallogr., Sect. B, 37, 978, 1981
- 9.6 6,6' - Dibromo - 2,2',4,4' - tetra - t - butylazobenzene
C₂₈H₃₀Br₂N₂
E.J.Gabe, Y.Wang, Y. Le Page
Acta Crystallogr., Sect. B, 37, 980, 1981

Part of structure diagrams index.



Programming began several years ago at both Cambridge and RAL. At Cambridge they worked on the problems of inputting the diagrams to the computer. RAL staff worked on the problem of page layout of the diagrams which come in all sorts of sizes and shapes and have to be arranged as economically as possible. Paper is expensive, and the reader would find it difficult to read an uncomfortably thick book if the diagrams had too much space around them. On the other hand, if they were all crammed together, it would not be easy to see quickly what they contained. We also had to solve the problem of how to move diagrams from Cambridge to Chilton, we had previously (Volumes 8-12) only moved the text.

Despite some misgivings about the wisdom of attempting so radical an innovation for a volume numbered 13, we planned to produce the first diagrams index in 1982. Operations staff at both computer centres helped us to realise this ambition; the camera ready copy rolled off the FR80 in April 1982 and was sent to The Cambridge University Press for printing. Last month the printed volumes were delivered to the Data Centre and now a copy is available for inspection in the RAL library (R61).

Kate Crennell, Ext.6397 will be pleased to answer any enquiries into the computing technicalities of this project.

RAL Sportsmen Shine at Loughborough

Nearly 300 SERC sportsmen and supporters converged on Loughborough University of Technology on Friday 20 August for the 1982 Outdoor Sports Day - a highlight of our sporting year. RAL took five of the major trophies, sweeping the board to take both bowl cups.

Two coaches left the Laboratory filled with anglers, cricketers, footballers, tennis players and bowlers. There was some chaos at Loughborough on arrival. It was a new venue, a large campus, and the facilities were rather widely spread but once the cricketers had established which was the second of the two pitches allocated and had obtained spring-loaded stumps, the games got underway.

The footballers considered the pitches for their six-a-side games were rather on the small side (they were, in fact, laid out as five-a-side pitches to indoors dimensions) but that did not dampen their enthusiasm anymore than the odd rain showers.

The anglers went off to their stretch of water and were not seen again until

later in the day, evening in fact, just at the time the bar was opened. No-one could prise them away from their pints long enough to determine if they had had a good day but none was heard to complain!

The bowls competitions, ably organised by our own Les Harding, were held at the Loughborough Granby Bowls Club whose members laid on coffee in the morning, a splendid buffet lunch, and tea in the afternoon. The bowlers, in fact, commented that they had never before been so well looked after. Praise was high for the facilities provided and the catering was considered exceptional. Indeed, the bowlers were given so good a time that there was talk that wherever the sports day is held next year, the bowlers would like to return to Loughborough.

Godfrey Stafford at last realised his ambition to attend a Sports Day and as a Vice-President of the Sports and Social Association presented the trophies - something of a family reunion. Then to supper (chicken, chips & peas) and an evening passed all too quickly in comradeship before

the coaches started for home, after a grand day of sport and sportsmanship.

A clear-up before the final coach left produced one bag of team strip, one anorak and one shirt. If the owner of the same wish to claim them, they can get them from Henry Vinall, Ext. 6607.

RESULTS

Angling - Rutherford A

Bowls

triples - Rutherford A

doubles - Rutherford A

Norman Ferguson & Alec Good

Les Harding & J Moir were runners up.

Cricket - Rutherford A

Rutherford B, runners up.

Tennis

mixed doubles - Atlas

(For reports see over)

From our own correspondents

Angling

This years event was held on the River Trent at Caythorpe, Nottingham; a venue strange to RAL, but previously fished by Daresbury.

Conditions were far from ideal, with a very strong wind blowing downstream, giving a river with 2 inch waves on it, making float fishing difficult. Most anglers preferred to use ledger tackle, but those who opted to float fish had the better results.

Rutherford 'A' (Peter Craske, Stan Buckel, Eamon Capocci and Geoff Kidd) turned in a fine performance convincingly winning the event. Daresbury 'A' were runners up, with Rutherford 'B' (Denis Day, Tony Ferrari, Len Willson and Frank Smith) in third place. A great performance by the Rutherford teams in difficult conditions on strange waters.

Peter Craske

Cricket

Despite utter chaos, play started at 12.15, both the Rutherford teams easily winning their opening matches.

The crunch match between the 'A' and 'B' teams proved to be the decider as both teams went on to win all their other games. The 'A' team batted first but good bowling by Andy Napper reduced them to only 10 runs for 3 wickets. However, an unbroken stand of 39 between Russell Newman (18 n.o.) and Bob Blowfield (14 n.o.) plus a few extras gave them a respectable total of 49 runs after their six overs.

The 'B' team, having a strong batting side, felt confident, but good tight bowling and fielding restricted them to 39 runs for 1 wicket, the 'A' team won by 10 runs.

In their match against Daresbury, the 'A' team nearly blew it, scoring the winning run from the penultimate ball! So the day ended with Rutherford 'A' the victors, with Rutherford 'B' runners-up.

Special congratulations go to Bob Blowfield who opened the 'A' team batting and remained undefeated all day; to Neil Johnson for his captainship!; and to Charlie Wrench for his wholehearted support!

Team 'A' Neil Johnson(Capt), Bob Blowfield, Mick Yates, Russell Newman, Nick Myer and Charlie Wrench.

Team 'B' Dave Stanley(Capt), John Craig, Andy Napper, Arthur Dawkins, Andy Briggs and Saliya (Sali) Wickramasuriya.

Russell Newman



Football

Following the early morning shocks at the non-appearance of Ken Paler's Aces and a loose wheel on the coach the Rutherford and Atlas teams were further dismayed at the size of pitches for the five-a-side football competition. The pitches being no bigger than a penalty area.

The competition was won by Daresbury 'C' who defeated Rutherford 'A' in a penalty shoot out after the final ended in a 1-1 draw. The final was marred by the physical approach of the Daresbury team which resulted in one of their players being sent-off. The defeated Rutherford 'A' team consisted of Martin Stenzhorn, Alan Ross, Mike Bahadori, Ray Brown, Steve Townsend and Sean Sunderland.

Alcoholics Anonymous this year appeared in the guise of Atlas 'A' and surprised everyone by defeating the powerful Daresbury 'B' to reach the semi-final. Emergency goalkeeper Colin Cox performed impressively, conceding only one goal during the tournament. During the evening, in anticipation of the pitch size being reduced even further next year Colin Cox and Kevin Lewis gained valuable experience at table football with many notable victories until the refreshments took their toll on their reflexes.

Atlas 'B' failed to qualify for the later stages but defied the experts who claimed goalscoring was impossible on such a small playing area by conceding 7 goals in their last match.

Finally some words of praise for Andy Flesher who much to his surprise had to organise the competition on the day and in addition refereed a difficult final with confidence and authority.

Martin Stenzhorn



82 RB 4039



82 RB 4047

Dr Godfrey Stafford presenting trophies to

left - Peter Craske (Angling)

top right - Lorna Claringbold and Tim Pett (Tennis, mixed doubles)

bottom - George Pullinger, Cyril Grindrod and Mary Shepherd (Bowls, triples).

Music for Pleasure

The new seasons "Classics for Pleasure" series by the London Philharmonic Orchestra at the Albert Hall opens on Friday 29 October. The concert begins at 7.45 pm.

All tickets are £2 and can be ordered through Nigel Angold, R25, Ext 6508.

The programme will be:

BERLIOZ Overture, Le Corsaire
MENDELSSOHN Violin Concerto in E Minor

SAINT-SAENS Symphony 3 in C Minor (organ)

The Oxford Pro Musica starts its Winter Season at the end of September.

Details of all programmes including those of a new venture "Family Classics on Sundays" may be obtained from Nigel Angold Ext.6508

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