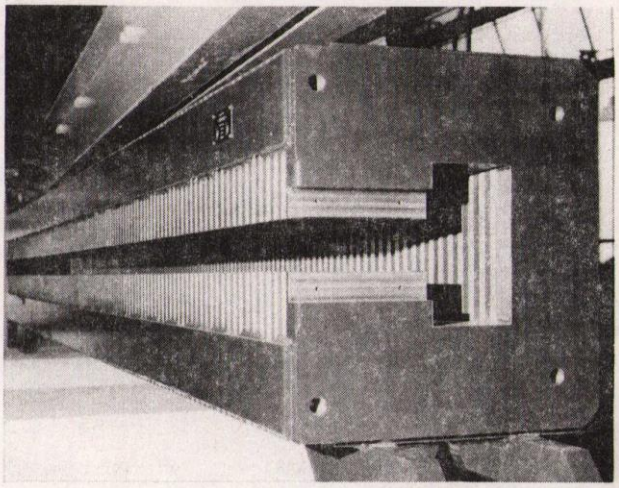
Rutherford Laboratory

bulletin 20

29 September-13 October 1975

DIPOLE MAGNETS FOR EPIC



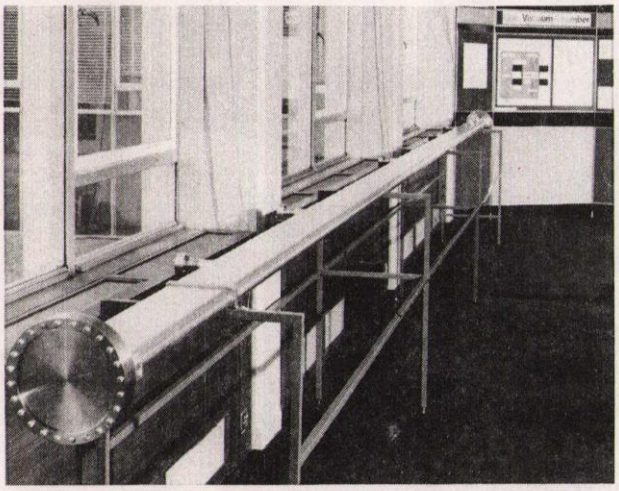
The month of September saw the arrival of two full-scale dipole magnets, each 4.5 m long. They have been manufactured to test magnetic materials and construction techniques as part of the EPIC development programme.

These 'C' type dipoles have dimensional tolerances similar to the CERN SPS dipoles; for example the pole faces must be parallel to 0.025 mm (approx. 1 thou of an inch). Tesla Engineering Ltd. supplied the coils, GKN Sankey Ltd produced the laminations and Morfax Ltd carried out the stacking and welding using the iron angle technique first developed at Fermilab.

A programme of dimensional and magnetic measurements is now under way. The magnetic measurements will be carried out using a computer controlled system based on CAMAC and a PDP8. Several small computers will be used to simulate the EPIC control system and to help in hardware and software development.

The final step will be to install a 10 m long section of extruded aluminium vacuum section in the magnets. Testing of distributed ion pumps, insulation, bake-out and other cleaning techniques can then be carried out.

It is hoped to have a fully representational section of EPIC, measured and assessed by the end of the year.



Photographs

Top: first magnet to arrive, on its test bed.

Bottom: section of vacuum chamber, recently on display in coffee lounge.

* * *

POSTAL CHANGES As from 29 September 1975 there will be increased prices for postal mail and in addition mail must be weighed on metric scales. Initially this will slow the progressing of mail through the main post room where all mail is weighed and franked and it would be appreciated if outgoing mail is sent to the post room as early as possible in the day for the first week to give staff time to come familiar with the new system.

SITE EMERGENCY Test soundings of the Site emergency klaxons: -

1. The klaxons will be sounded at 10.00 hours on Tuesday 7 October 1975.
2. Notice boards announcing the sounding will be posted at entrances to the Laboratory from Monday 6 October, until after the test has been completed.
3. Any defective klaxons should be reported to B G Totham, R1, Ext 270.

INTERNAL EVENTS

NIMROD LECTURE SERIES
Monday 29 September
11.30
Lecture Theatre

Supersymmetry

Dr R Delbourgo/IC

HEP SEMINAR
Wednesday 1 October
11.00
R61 Conference Room

New Particles and Neutrino Interactions

Dr R J N Phillips/RL

HEP ELECTRONICS GROUP SEMINAR
Wednesday 1 October
13.30
R61 Conference Room

A new series of informal seminars, organised by the Data Handling Section, will be held on Wednesdays commencing at 13.30 hours. The provisional title of the first in the series is 'Some Ideas from the States'. The speaker is J Burren/RL.

SEMINAR IN COMPUTING
Friday 3 October
11.00
R61 Conference Room

SEAS 1975. (Note: SEAS is a European association of users of IBM equipment)

Members of C & A Division who recently attended the SEAS meeting in Dublin will talk about aspects of a selection of the seminars. In particular, mention will be made of IBM's response to the recent SEAS report concerning IBM Utilities. (C & A Division played a large role in the preparation of that report).

HEP SEMINAR
Wednesday 8 October
11.00
R61 Conference Room

Partial Wave Analysis of Diffractively Produced $p\pi^+\pi^-$ States in K^- & π^-p Interactions.

P Thornton/IC

HEP ELECTRONICS GROUP SEMINAR
Wednesday 8 October
13.30
R61 Conference Room

Microprocessor Teach-in. Chairman: P Wilde/RL. Agenda as follows: -

13.30.	Microprocessor Types:	
	(a) The Intel 8080 Microprocessor System	*R Bairstow*
	(b) Bipdar Microprocessor Elements	*G M McPherson*
	(c) A Comparison of Alternative Systems	*P Wilde*
15.00.	TEA	
15.20.	Microprocessor Applications:	
	(a) Bubble Chamber Scanning	*J Barlow & J Watson*
	(b) What is the Role of Microprocessors in CAMAC Systems	*M C Cawthraw*
	(c) An Application of Microprocessors in Instrumentation	*B Belcher, Dept of Aeronautics/Imp. Coll.*

FILM SHOW
Thursday 9 October
12.40
Lecture Theatre

The Grandeur that was Rome - Skeleton of an Empire, 31 mins.

Sir Mortimer Wheeler examines the greatness of the Roman Empire and speculates how much western civilisation owes to its influence.

La Pince a Ongles, 13 mins.

Based on a Jean-Claude short story of a young couple whose amorous intentions are frustrated by a missing pair of nail clippers.

NIMROD LECTURE SERIES
Monday 13 October
11.30
Lecture Theatre

Geometrical Scaling

J Dias de Deus/RL

NIMROD SCHEDULE

CYCLE 6, 23.9.75 - 14.10.75

MACHINE PHYSICS **HIGH ENERGY PHYSICS**

Team	Beam	Experiment		State
BRISTOL/SOTON/RL	KI5a	No 120:	K^-p differential cross-sections.	Setting up
CAMB/RL	πI2	No 114:	$\pi^-p \rightarrow K^0\Lambda^0$ differential cross-sections and polarisation	Data
BIRM/SURREY/RL	KI7	No 113:	Experiments with stopping Kaons	Data
IMP. COLL/RL	π8a	No 128:	Meson production near threshold	Data
RL	πII	No 154:	Radiobiological Experiment	Data
OXF/ROME/RL	TI		Test beam facility	Tests

EXTERNAL EVENTS

ABINGDON LECTURE SERIES
October at 1400 hrs
Lecture Theatre

Science and Politics

M Gowing/Oxford

IERE BRANCH MEETING - READING
8 October at 19.30 hrs.
Caversham Bridge Hotel

Microprocessors - Recent Technological Advances and Applications

N Carrathers/Market Support Manager, Digital Equipment Co Ltd

THE ROYAL SOCIETY
A Meeting for Discussion
17 October at 10.00 hrs.
6 Carlton House Terrace, London

High Power Lasers. Organised by Sir George Porter FRS in co-operation with the SRC.

Chairman - Sir George Porter FRS. Programme as follows:-

10.00 Introductory Remarks - Sir Harrie Massey, Sec. R.S.
10.05 High-power lasers; the state of the art - Prof D J Bradley/Imp Coll.
11.20 Plasma diagnostic techniques using high-power lasers - Dr N J Peacock/SRC Culham.
12.10 Materials processing with high-power lasers - Dr D T Swift-Hook/CEGB, Soton.
14.15 Laser-plasma interactions - Mr T P Hughes/Dept of Physics, Essex.
14.50 Laser-induced, compression of matter - Mr D E T F Ashby/Harwell
15.55 Science Research Council's proposals for a central high-power laser facility (see below) -
Sir Sam Edwards FRS/SRC London, Dr G H Stafford/SRC Rutherford Laboratory.
17.05 General Discussion and, 17.25 Concluding Remarks.

The SRC's plans to establish at the Rutherford Laboratory a central high-power laser facility for the use of university students will be described. The principal scientific objectives are:-

(a) the investigation of the formation and properties of dense plasmas produced by laser compression;
(b) the investigation of non-linear interactions between high-density laser radiation and matter;
(c) the development of more efficient and new high-power lasers for future experiments in these and other fields.

(applications to Training Section before 3 October)

The initial installation will include a neodymium laser of power approximately 700 GW and there will be an extensive range of diagnostic and experimental equipment.
Proposed arrangements for the support of university users will be outlined.

ROADWORKS - A417 The Post Office will be carrying out cable-works across and along the A417, starting near the Acorn Cafe at the end of September and crossing Rowstock Crossroads late in October. Throughout the period, delays at Rowstock for all traffic are inevitable, and drivers are advised to avoid the area if they can.

The proposed programme of roadworks is as follows:-

WEEK BEGINNING 29 SEPTEMBER

Excavation of trench across A417 near Acorn Cafe.
Excavation of large manhole.
Excavation of trench alongside A417 towards Rowstock.

Alternative one way working controlled by lights, which will be manually operated during inmuster and outmuster.

WEEK BEGINNING OCTOBER 13

Excavation of trench diagonally across A417 to Rowstock Crossroads.

A417 between Rowstock and Featherbed Lane to be one way at all times, east to west. East bound traffic to be diverted along Featherbed Lane which will be one way with supplementary traffic lights at its junction with the A.34.

WEEK BEGINNING OCTOBER 27

Excavation of trench across A34 south of Rowstock Crossroads.

Probable diversion of all traffic onto one lane of dual carriageway. During this period all traffic to Didcot and points east will be advised to use the road through Chilton.

DEATH BENEFIT SCHEME At 31 March 1975 the balance in hand was £577.57. Membership of the Scheme totalled 239.

HAVE YOU CONSIDERED JOINING?
The fund provides for an immediate cash payment to the nominee without formality or fuss. At present the benefit amounts to £50 per death. Higher membership could mean higher benefit.

It costs 10p to join and subscriptions are deducted from pay at the rate of 5p per month or 1p per week. Because of the healthy state of finances, subscriptions are suspended at present but could be re-introduced at any time at the discretion of the Management Committee. Application forms are obtainable from the Personnel Group.

FILM BADGE NOTICE It is Period 10. Colour strip - YELLOW for the βγ films and neutron packs. Please check that you are wearing the correct dosimeter and that all old ones are returned.
Next film change - Monday 6 October.

MISSING EQUIPMENT The following item of equipment has been reported missing: - Digital voltmeter (Digital Measurements Ltd) Type 2020. Ser No 11077. Anyone knowing the whereabouts of this instrument is asked to contact D R Culliford, R2, Ext 6133/6363.

SALES TO EMPLOYEES Sales of scrap metal/plastics as set out in RLN/73 will be made on the following dates: -
3, 17 and 31 October.

HE MOVED £MILLIONS

"I'm only retiring from the Rutherford Laboratory, I'm NOT retiring from life"! These words brought to an end one of those cheerful yet sad occasions, the presentation of a farewell gift to Charles Page on his retirement last Friday, 19 September.

At the age of 14, Charlie was apprenticed to the electrical contracting industry; a year or so later he took part in the General Strike of 1926. He joined AERE Harwell in 1952 as an electrician, rising to shift charge hand before moving to the RL in 1961, where he was involved with the organisation of general maintenance on the P.L.A. until its shut-down in 1969. A year before, Charlie had embarked on a venture which was to produce quite a few headaches, but in the end, wide aclaim.

However, we must turn the clock back to the late 30's when Charlie moved to the Channel Islands and a job with the Jersey electricity supply authority. As the media constantly reminds us, the 30's closed with the outbreak of war followed in 1940 by the invasion of France. On the night the last ship left for England Charlie's son was born with the result that the Page family spent the next five years in occupied Jersey.

His stories of that period could fill a book, stories which illustrate man's resourcefulness and inventiveness in times of stress and difficulty and which he recounts without rancour and with great humour. He assured me that the best cycle tyres were made from lengths of rubber hose as used on pneumatic road drills and a very effective adhesive for repairing tubes was made from bits of crepe soles dissolved in illicit petrol.

He could not have forseen that the day would arrive when he would be responsible for transporting masses of costly equipment across the channel he had been unable to cross for five long years.

Joe Marsh, Head of the Nuclear Physics Apparatus Department spoke of his pleasure in addressing the many friends and colleagues packed into the R12 Conference Room on Charlie's last day. He will remember the first despatch of equipment to CERN on a night with the rain lashing down. Since that day Charlie had been responsible for the packing and transport (necessitating masses of paper work) of apparatus to CERN and its return, also to the USA and Canada. "We depended on Charlie and he never let us down. Since that night in 1968 he has moved very costly equipment to the value of £m2½ and we haven't had even a broken valve". Joe said he was very sorry that Charlie was retiring, he would have liked him to go on for his century. There were many stories he could tell from the transport of steel plates for the muon detector to CERN via road and barge up the Rhine to the problems with very wide loads etc.

On behalf of Charlie's numerous friends and colleagues, Joe presented him with a portable radio and wished him a long and happy retirement. In reply Charlie said he had learned many things, had some very good times and had enjoyed his colleagues company. He thanked everyone for the present, - it was the thought and not the size that he valued. To great laughter he said he felt he had achieved fame at last.

Charlie is NOT retiring from life; he talks about a part-time job and, "theres a lot of voluntary work to be done". We add our best wishes to Charlie and feel sure that his many abilities, resourcefulness and cheerfulness will be of great benefit in a number of fields for many years to come.

The following message has been received - Charlie and Peggy Page wish to convey their sincere thanks and appreciation for the wonderful 'send-off' and gifts on the retirement of Charles.

* * *

OVERSEAS VISITS Dr J D Lawson, to CERN 28-30 September for discussions.
The Director, to CERN, 30 September - 1 October to attend CERN Scientific Policy Committee meeting.
Mr D R Perry, to Erice, Sicily, 1-10 October, to attend course on High Energy Radiation Dosimitry and Protection.
Dr G E Kalmus, to CERN, 5-9 October, to attend CERN open Meeting, TC Bureau and TCC, K^0 Experimental Collaboration Meeting.
Mr W Cameron, to CERN, 7-9 October, to attend K^0 Experimental Collaboration Meeting.
Dr K C Sumorok, to University of Tel-Aviv, Israel, 7 October - early December, to work with Tel-Aviv Group on Omega Neutron Trigger Experiment.
Dr L C W Hobbis, to Grenoble, 8-10 October, to attend Scientific Council Meeting at ILL.
Prof. P Wilde, Dr D R Ouarrie, Mr R D Downs and Mr J V Smith, to Brussels, 13-17 October, to attend 2nd International Symposium on CAMAC in Computer Applications; Mr Downs will present a paper at this symposium.

CHRISTIAN FELLOWSHIP All are welcome to join in a time of prayer, led by Meryck Wyard of R18, at 12.30, Friday 3 Octobter in the R12 Conference Room.

During the month of October the Fellowship will be studying 'the glory of Jesus Christ'. The first meeting on Friday 10 October, will take the form of an introduction led by John Thomas, and the last three will be open discussions on certain aspects of the 'Glory'. All are cordially invited to come along at 12.30 in the R12 Conference Room.

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Deadline for Insertions	GENERAL & SOCIAL NEWS	INTERNAL & EXTERNAL EVENTS
	Tuesday 1600	Wednesday 1200