



Rutherford
Laboratory

COMMON/CSCAL/IBM, NERR, NCH, NGAP, ISCAN, NBR, NGR, NSCAN1, NRO
IYSEL, IYSEU, IYMAX, NTRACK, NSCAN, NES, NFAIL, MAXTR, MA
2NBEGIN, NTK, ATRY, NMISS, NSSR, NFID, MAXMIM, NFIRST, NEN
COMMON/CFID/MFX(20,3), MEY(20,3), NFDX(10,3), NFX(3)
QTAB(2,20,3), NX(100,4), NY(100,4), XN(2), YN(8), TB(10
R IDY(100,2), JDX(4), JDY(4), IHS(4), ICV(2), I
S NCF(16), IFS, NFS, FX, FY, JK, PIC, KPIC, NCUUNT, NBIN, MAXDV, MAX
T MAXN, CTA, CTR, MY, M, PIC, JD, F, JF, F(20,3), N(20,3)
DIMENSION NCTR(144), NCTR(20), CTR(112), NCTR(12), MDEL(21)

bulletin

6

22 March - 12 April 1976

Dr Pickavance elected F.R.S.

AMONG THE 40 ELECTED LAST WEEK AS FELLOWS OF THE ROYAL SOCIETY WAS DR. THOMAS GERALD PICKAVANCE, C.B.E., FORMER DIRECTOR OF THE RUTHERFORD LABORATORY.

THE CITATION READ
"DISTINGUISHED FOR CONTRIBUTIONS TO THE DESIGN AND CONSTRUCTION OF ACCELERATORS FOR HIGH ENERGY PARTICLES AND FOR HIS EXCEPTIONALLY EFFECTIVE DIRECTION OF THE RUTHERFORD HIGH ENERGY LABORATORY".

ALSO ELECTED ALONG WITH DR. PICKAVANCE WERE: PROF. D. J. BRADLEY, PROFESSOR OF APPLIED OPTICS AT IMPERIAL COLLEGE LONDON AND INVOLVED CLOSELY WITH THE NEW HIGH POWER LASER CENTRE AT THE LAB; PROF. GEOFF ALLEN, ALSO OF IMPERIAL COLLEGE; PROF. R. BLIN-STOYLE OF SUSSEX UNIVERSITY; PROF. H. ROSENBROCK OF UMIST; DR. JOHN HORLOCK, VICE-CHANCELLOR OF SALFORD UNIVERSITY AND PROF. R. J. ELLIOTT OF BRISTOL UNIVERSITY.

70 MeV INJECTOR - PROGRESS REPORT

Last October we reported that the operation of the pre-injector for the new accelerator was up to specification, giving a 200 mA proton beam at 665 KeV. Tuning runs involving acceleration through the first of the four tanks started on Monday, 16th February, since when, running periods have alternated with pauses during which equipment has been prepared for the next stage of tuning. The beam was allowed to coast on through tank 2 at 10 MeV to a beam stop placed between tanks 2 and 3.

The specification is for 75 mA maximum beam current

at the end of tank 1, but while tuning is in progress both the peak current and pulse length must be limited to prevent the beam overheating any component. We typically used 80-90 mA beam pulses of 100 μ s duration at tank 1 input. The fraction of input beam that can be accepted and accelerated is of interest, and in our present state of commissioning we expect about 30% of the input beam to be transmitted at 10 MeV from the first tank.

By Friday 20th February we recorded 11 mA, and subsequently this has been improved to 28 mA, which is up to our expectations at present.



CHEQUE FOR CHECK SRC Awards Scheme Suggestion, number four hundred and ninety seven (they keep rolling in) turned up trumps for Peter Champ, a skilled craftsman in Nimrod Divisions Mechanical Engineering Group.

His suggestion for a transducer support platform, earned him a cheque for £125, presented by Ron Russell, the Deputy Division Head, on Monday 8 March. Commenting on Peter's unique suggestion, Ron spoke of the money saved by reducing technical and craft effort and, the time spent in working in very cramped and awkward conditions.

The platform supports the transducer sensing heads used for aligning, to about plus or minus 5 thou., the 152 drift tubes in the 4 tanks of the new 70 MeV injector.

The great value of this platform is that it can be removed and repositioned quickly, and conveniently and anyone who has worked inside one of these tanks (hello PLAmates!) will appreciate this point. Well done Peter.

INTERNAL EVENTS

NIMROD LECTURE SERIES

Monday 22 March
11.30
Lecture Theatre

Coulomb - Nuclear Interference Scattering Experiments Between 1 and 10 GeV/c

Dr P Jenni/CERN - Caen collaboration.

HEP SEMINAR

Wednesday 24 March
11.00
R61 Conference Room

Results from the FNAL Muon Experiment

T Quirk/Oxford

HEP DATA HANDLING SECTION SEMINAR

Wednesday 24 March
13.30
R61 Conference Room

The Status II Information Retrieval System

I Croall/Harwell

SAFETY FILM SHOW

Wednesday 24 March @ 12.40 & 13.15
Thursday 25 March @ 13.15
Lecture Theatre

Incident Rendered Safe, a 20 minute colour film dealing with hazardous chemical loads. Although only a small percentage of the total industrial transport, any incident involving them may represent a risk to life and property. The film demonstrates two such incidents and the actions taken which needed active co-operation between various public services to deal with such incidents.

NIMROD LECTURE SERIES

Monday 29 March
11.30
Lecture Theatre

An Investigation of the S-Region's Antiproton Interactions at 600 MeV/c

Professor M Cresti/CERN and Padua University

HEP SEMINAR

Wednesday 31 March
11.00
Lecture Theatre

Novel Applications of the Renormalization Group

M Green/Cavendish

HEP DATA HANDLING SECTION SEMINAR

Wednesday 31 March
13.30
R61 Conference Room

Real-Time Basic for CAMAC

A Lewis/Harwell

FILM SHOW

Thursday 1 April
12.40
Lecture Theatre

John Constable 1776-1837. A 26 minute colour film

One of a series by Sir Kenneth Clark

SEMINAR IN COMPUTING

Friday 2 April
11.00
R61 Conference Room

An Economical Solution to the CPU Time Problem. *R Candlin/Edinburgh U.*

The rapidly falling price of LSI circuits (memory and micro processors) makes computer construction practicable even for small groups. A system designed and under construction at Edinburgh interfaces to any available mini computer and provides "back-end" number-crunching capability comparable with that of a 370/168. This is much more economical than tying up a mainframe with a long resident CPU bound program. The hardware and software aspects will be described with emphasis on the user's point of view.

NIMROD LECTURE SERIES

Monday 5 April
11.30
Lecture Theatre

Spin and Torsion, a Neglected Aspect of General Relativity.

Dr J Charap/QMC

HEP SEMINAR

Wednesday 7 April
11.00
R61 Conference Room

Weak Decays and Asymptotic Freedom

Dr G G Ross/CERN

HEP DATA HANDLING SECTION SEMINAR

Wednesday 7 April
13.30
R61 Conference Room

The Role of MAST in the Rutherford Central Computing System

M Curtis/RL

SAFETY FILM SHOW

Wednesday 7 April @ 1240 & 1315
Thursday @ 13.15
Lecture Theatre

IF ONE GREEN BOTTLE ... , a 23 minute colour film designed specially for management at all levels. The film shows a group of managers in court defending their company in an action for damages brought by an employee who had lost the sight of an eye.

IF ONE GREEN BOTTLE ... , works on several different levels. It is a powerful argument for observing eye protection regulations. It presents an accurate picture of the Law in action. Above all, it encourages managers to recognise and correct the all-too-common shortcomings in their attitude to safety. This is the last in the present series of safety films.

EXTERNAL EVENTS

DARESBURY LECTURE SERIES/LECTURE THEATRE - 1400 hrs

26 Mar: Prof S Doniach/Orsay and Stanford - EXAFS work on the Stanford Synchrotron.

DARESBURY LECTURE SERIES/LECTURE THEATRE - 1400 hrs

23 Mar: G Ringland/RL - Direct Lepton Production.

THEOR. PHYS. DIV. SEMINARS/CONF.RM.BLDG.8.9, AERE-1415 hrs

26 Mar: Dr J Inkson/Cambridge - Effects of Electron Interaction on Semiconductors.
2 April: Dr M V Berry/Bristol - Waves and Catastrophe Theory.
9 April: Dr J Sinclair/Harwell - Computer Modelling of Cracks, Notches etc.

NP DIV. COLLOQUIA/CONF.RM. HANGAR 8, AERE - 1530 hrs

25 Mar: Mr S J Dagg/Nuclear Health & Safety Dept, CECB - to be announced.

1 April: Mr J F Cameron/Nuclear Enterprises Ltd - Radioisotope Instrumentation.

1976 CULHAM PLASMA PHYSICS SUMMER SCHOOL, 5-16 July 1976

This summer, Culham Laboratory is again running an introductory course in plasma physics and its applications in other branches of physics and technology. The course will be suitable for final-year undergraduates and post-graduate research workers. Closing date for applications - 3 May. Further details from the Editor or Culham on Abingdon (0235) 21840 Ext. 546.

SAD NEWS

The sudden death of Mr Noble, the Harwell dentist on Sunday, 7 March came as a great shock. Pat Noble came to Harwell in 1955 and during the following 21 years became well known to vast numbers of people both professionally and through his sporting activities. He was aged 48. We extend our deepest sympathy to his wife and family.

ROYAL SOCIETY SOIREE

The Royal Society has once again invited the Rutherford Laboratory to exhibit at their annual soiree to be held at 6 Carlton House Terrace, London on Thursday 6 May. Two exhibits will be presented, the Finite Elements Film and, MAGLEV.

NATIONAL SAFE DRIVING AWARDS

Once again we have reached the time of year when the Royal Society for the Prevention of Accidents, National Safe Driving Awards are announced. We offer our congratulations to the Laboratory drivers who have received the following awards for 1975:-

Mr H G Patterson - Bar to 15 Year Medal (19 accident free years).
Mr E A Smith - Oak Leaf Bar to 10 Year Medal (13 years)
Mr A H J Hill - Oak Leaf Bar to 10 Year Medal (12 years).
Mr J Culley - Oak Leaf Bar to 10 Year Medal (11 years).
Mr D A Stock - Bar to 5 year Medal (9 years).
Mr B T Field - Second Year Diploma.

OVERSEAS VISITS

Dr J B Forsyth, to ILL Grenoble, 23 March - 8 April, to carry out experiment.
Mr D A Gray, to CERN, 28 - 30 March, to attend ECFA meeting.
Mr L Phillips & Mr K Miles, to CERN, 28 March - 2 April, for installation of I.S.R. solenoid counter assembly.
Dr R M Brown & Dr R J Ott, to Heidelberg, 5-7 April, to attend Hyperon 300 Collaboration meeting.

LOCAL SUGGESTIONS AWARDS

At the 18th meeting of the Local Suggestions Awards Committee held on 10 February 1976 the following awards were approved:-

Mr A Francis	Atlas		£5
Mr A M Jackson	Atlas		£65
Mr P Almand)	Engineering	R18	£5
Mr T Morgan)	Engineering	R18	£10
Mr H C Berryman	Engineering	R18	£10
Mr H C Berryman	Engineering	R9	£5
Mr R I Hogan	Engineering	R9	£5
Mr A Lester	Engineering	R18	£10
Mr H McGrath	Engineering	R18	£10
Mr T Morgan)	Engineering	R18	£10
Mr N Martindale)	Engineering	R18	£10
Mr P J Champ	Nimrod	R2	£125
Mr J Conlin	Nimrod	R3	£5
Mr R P Gover	Nimrod	R6	£5
Mr J Pattinson	Nimrod	R3)	£10
)	£5
Mr B R Phillips	Nimrod	R3	£10
Mr B J Smith	Nimrod	R2	£40
Mr E G Starr	Nimrod	R3	£5

RUTHERFORD LABORATORY BULLETIN

Published by the Scientific Administration Group

Editor: H F NORRIS

Deadline
for
Insertions

1000 hours Wednesday 7 April

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Abingdon 21900 Ext 484

THE FINAL COLLECTION A suitable caption for the photograph could well be 'a fishy story' as it shows Mr E C G Bird with one of the gifts, a fishing rod kit, presented to him on the occasion of his retirement on Wednesday 10 March.

Dicky, born in Lowestoff in 1910, under the sign of Pisces, joined the Lab in April 1968 and has been Head Messenger for the past 6 years. He joined the Army at the age of 16 (or was it 15?) and served in the Royal Regiment of Artillery for 36 years attaining the rank of Major.

After a spell as 'mine host', he spent 18 months in the life insurance world before joining the Lab.

Jack Marshall, Acting Head of General Administration, on behalf of Dicky's many friends and colleagues (many were crammed into No 2 Conference Room for the occasion), presented him with a number of parting gifts and wished him a long and happy future.

In reply, Dicky, or was it Major Bird, in a voice which suggested we all 'get fell in', said he was very sorry to be leaving. He had retired twice before and it really meant the start of a new life.

After relating a number of 'funnies' he concluded by thanking various people, including the messengers, for the help he had received, and everyone for the gifts.

We join in wishing him a long a happy future - perhaps it is true that old soldiers never die but Dicky - 'get your hair cut'.



BLOOD DONOR CLINIC Please do not forget the dates for the next clinic - Tuesday 23 March and Wednesday 24 March. It will be held in the Recreational Hut, R15 and will be open from 1000-1200 and 1330-1500 on both days.

BRAZING FOR DESIGNERS & SUPERVISORY STAFF The British Association for Brazing and Soldering is holding another of their two-day courses on Brazing for Designers and Supervisory Staff at BNF Metals Technology Centre, Wantage on 11 & 12 May 1976. Further information from Training Section, R20.

FILM NOTICE Period 4 commences Monday, 22 March. Colour Strip - GREEN for $\beta\gamma$ films and neutron packs.

Please note that only people associated with the 70 MeV injector will be issued with neutron packs for this period.

Six monthly dosimeter change for people with surnames commencing M, N, O and P.

BULLETIN NOTICE Owing to Compumag Conference commitments and the Easter break, this and the following issue will each cover a period of three weeks.

SOCIAL NEWS

YOGA The Rutherford Beginners Class is due to finish on 1 April. It is hoped to start an intermediate class on 8 April. Anyone wishing to enrol for this (including members of the present class) should send their name, building and extension number to Mrs Gilbert, R20.

CHRISTIAN FELLOWSHIP All are welcome to a time of Bible Study led by D.Ness Wilson of Bldg. R36. The letter of Paul to the Christians at Colosse is being studied and the meeting commences at 12.30 pm in the R12 Conference Room, on 26 March.

Ernie Medway of Bldg. R34 will be leading our monthly prayer meeting on 2 April and all are invited to come and share. If anyone has requests for prayer please contact any member of the Fellowship for 'prayer changes things'. The venue, as usual, is R12 and the time 12.30 pm.

The Death and Resurrection of Jesus Christ is the central theme of the Christian faith but what is the relevance of this in the twentieth century? If He arose from the dead is Christ alive today or does the Christian believe in a myth or fable? All are welcome to our Easter talk given by Paster Smy of the Wallingford Baptist Church on Friday 9 April at 12.30 pm in the R12 Conference Room.

RECORD CONCERTS Tuesday 23 March at 12.40, Lecture Theatre. "HUMPH" AT THE CONWAY - a recording of a live Humphrey Littleton Jazz concert at the Conway Hall in Red Lion Square (near State House) in 1956. (Advertised for 9 March but unavoidably postponed).

Tuesday 30 March at 12.40, Lecture Theatre. "THE WORLD OF THE ORGAN" - a wide selection of short pieces played on various church and concert organs throughout the world by eminent performers.

Tuesday 6 April at 12.40, Lecture Theatre. "HIGH SOCIETY" - Music and Songs from the film starring Bing Crosby, Frank Sinatra, Grace Kelly and Louis Armstrong.

HORTICULTURAL SOCIETY EVENING LECTURE Just in time we hear of a lecture on 'GROWING VEGETABLES' to be given in the Social Club at Harwell on Wednesday 24 March at 8 pm. The talk, illustrated by slides will be given by Mr M MacLean, a commercial grower with a lot of practical experience. Non-members of the Social Club can be signed in as temporary members by a member at a cost of 10p.