



Rutherford  
Laboratory

R(12), NDT(60,3), ISW(3500), ANGLE(60), YINT(60), DUM(100),  
[6,3], NACHT(48), XCEN(12), YCFN(12), YARS(12), TCH(12), AR  
MMON/CFID/MFX(20,3), MFY(20,3), NFDX(10,3), NFX(3), NFD(3), I  
B(2,20,3), NX(100,4), NY(100,4), XN(2), YN(8), IR(100,2), IX(100,2),  
DY(100,2), JDX(4), JDY(4), IHS(4), IOV(2), IUN(2), IUS(2), IUS(2),  
CF(16), IFS, NFS, FX, FY, JK, PIC, KPIC, NCOUNT, NBIN, MAY, UN  
AXN, CTA, CTB, MX, MY, JA, JB, JC, JD, JE, JF, XF(20,3), YF(20,3),  
MMON/CJACK/NSY(20,30), NMS(20), NDR(20), NSX(20,30), AN(160  
(20), BX(20), NST1(20), NST2(20), TNER(20), NSX(20,30), AN(160

4-11 June 1973

bulletin 20

VISIT BY THE SCIENCE  
RESEARCH COUNCIL, 15/16  
MAY 1973

Message from the Director:

"I have received many letters from Council members to record their pleasure in being shown round the Laboratory and seeing some of the work which is going on. May I take this opportunity of thanking members of the Laboratory staff for all their efforts which contributed so much to the success of the visit."



Taking lunch in the Restaurant, from left to right:- Dr G Manning, Professor S F Edwards FRS, Dr G H Stafford, Sir Brian Flowers FRS, Dr J Howlett and Dr D B Thomas.

#### FAREWELL TO A COLLEAGUE

Frank Golding of R9 E S D workshop, a sprightly 65 year old retired on the 1 June 1973. On Friday 18 May, on behalf of his many friends and colleagues at the Rutherford Laboratory, Mr R Tolcher, E S D Group Leader presented Frank with a motorola car radio as a token of their esteem and congratulated him on a splendid innings.

Frank served with the RAF from 1939 to 1962 after which he joined the staff at the Rutherford Laboratory. He has been associated with the Heavy Gang for many years coping with varied tasks including very early morning snow clearance and moving heavy loads at short notice. He always emerged happy and smiling with toetectors unscathed. May he enjoy many happy years in his retirement.

#### MISSING ITEMS

A navy blue nylon raincoat was taken in error from R22 Restaurant on 3 May. If anyone finds they have the wrong coat will they please contact the Restaurant Manager.

Model 8 Avometer, Serial No 96887/469 is missing, anyone knowing the whereabouts of this item please inform C Walters Extension 6152/288.

#### FILM BADGE NOTICE

It is Period 6. Colour Strip BLUE for B<sub>y</sub> films and neutron packs. Please check that you are wearing the correct dosimeter and old ones returned. Please note it is absolutely essential that all neutron packs (green/grey holders) are returned on time otherwise they will not be developed by RPS at Sutton.

#### OVERSEAS VISITS

M R H Donald, to Erice, Sicily, 4 - 16 June, to attend International School of Applied Physics.  
Dr G H Stafford, to CERN, 5 - 6 June, to attend meeting of CERN Nuclear Physics Research Committee.  
Dr J D Lawson, to Erice, Sicily, 5 - 16 June, to attend Summer School on "High Intensity Relativistic Particle Beams" and give a Seminar.

Overseas Visits continued on Page 4



## INTERNAL EVENTS

### NIMROD LECTURE SERIES

Monday 4 June  
11.30  
Lecture Theatre

" $K^+p$  Elastic Scattering below 1 GeV/c and Phase Shift Analysis"

*Dr J Dowell/University of Birmingham*

### FILM SHOW

Tuesday 5 June  
13.15  
Thursday 7 June  
12.40  
Lecture Theatre

"The High Flux Reactor at the Institut Laue-Langevin, Grenoble" (20 minute film)

The SRC became a partner in the Institut Laue-Langevin in January this year. This film, made at the Institut during construction of the High Flux Reactor (which commenced in 1968), has something of interest for everyone. For the specialist the engineering and technical problems are well illustrated whilst for the non-specialist imaginative camera work captures the excitement of a big new project and the charm of the surrounding areas.

### ONE DAY SEMINAR - HFL REGULATIONS

Wednesday 6 June  
Lecture Theatre

The Oxford and District Industrial Accident Prevention Group will hold a one day seminar on the Highly Flammable Liquids and Liquified Petroleum Gases Regulations 1972. Admission by ticket only.

### SEMINAR IN COMPUTING

Friday 8 June  
11.00  
R12 Conference Room

"Developments in Momentum Parameterisation"

*H Wind/CERN*

Dr Wind will review developments and experience of momentum determination in large data samples.

After a number of years in which parametric methods have enabled "production mode" calculations to proceed without explicit calls to the magnetic field, some applications are found where limited information about the magnetic field can be used to good effect without unduly slowing down the analysis. Trajectories in the Split Field Magnet at the ISR, for example, respond well to cubic spline fits to segments of track, using field values averaged over segments as constraints on fitted curvatures.

## NIMROD SCHEDULE

CYCLE 5 5 6 73 - 26 6 73

MACHINE PHYSICS

HIGH ENERGY PHYSICS

<u>Team</u>	<u>Beam</u>	<u>Experiment</u>	<u>State</u>
HBC/UCL/BRUSSELS	K19	Stopped $K^-$ in $H_2$ - Track Sensitive Target	Setting up
BRISTOL/SOTON/RHEL	K15	$\pi^+p$ Differential Cross-Sections	Data
CHURCHILL HOSPITAL/ BART'S MEDICAL COLLEGE/ RHEL	$\pi$ 11	Radiobiological Experiments	Data
COUNTER GROUP A/ DETECTORS GROUP	$\pi$ 8	Proposal Studies and Detector Evaluation	Tests
BIRMINGHAM/SURREY/RHEL	K17	Stopping Kaons	Setting up
CERN/ORSAY/OXFORD	P81	Hadron-Proton Spin	Setting up



# EXTERNAL EVENTS

## THEORETICAL PHYSICS SEMINAR

Monday 4 June  
16.15  
Queen Mary College

'Internal Symmetry Extensions of Gravitational Type Lagrangians'

*Dr C J Isham/Imperial College*

## DARESBUURY LECTURE SERIES

Tuesday 5 June  
14.00  
DNPL

'Polarisation in  $\pi^+\pi^+\pi^+\pi^+$  at Intermediate'

*C Daum/CERN*

## THEORETICAL PHYSICS SEMINAR

Tuesday 5 June  
14.00  
Building 8.9 AERE

'Equations of State for Liquids'

*Dr M Gillan/AERE*

## THEORETICAL PHYSICS SEMINAR

Wednesday 6 June  
14.30  
University of Manchester

'Coulomb Energies in Nuclei'

*Dr A M Lane/AERE*

## THEORETICAL PHYSICS SEMINAR

Thursday 7 June  
16.15  
Clarendon Laboratory Oxford

'Progress in Weak-Interaction Theory (using Higgs-type Symmetry Breaking)'

*Dr J C Taylor/University of Oxford*

## COLLOQUIUM

Friday 8 June  
16.15  
Clarendon Laboratory Oxford

'Nuclear Pseudomagnetism'

*Professor A Abragam/College de France*

## ELEMENTARY PARTICLE THEORY SEMINAR

Friday 8 June  
14.20  
Nuclear Physics Laboratory  
Oxford

'An  $SL(6, C)$  Gauge Theory'

*Dr C Isham/Imperial College*

## NUCLEAR PHYSICS COLLOQUIUM

Friday 8 June  
14.30  
Building 146 AERE

'Synchrotron for Spectroscopic Use'

*Dr G Marr/University of Reading*

RUTHERFORD LABORATORY BULLETIN

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**Editor:** H F NORRIS

Deadline  
for  
Insertions

GENERAL & SOCIAL NEWS

Tuesday 1600

INTERNAL & EXTERNAL EVENTS

Wednesday 1200

Room 42 Building R20  
Rutherford Laboratory  
Chilton Didcot Berks  
Abingdon 1900 Ext 484



OVERSEAS VISITS contd

Dr R G Roberts, to Poland, 6 - 12 June, to participate in the XIII Cracow School of Theoretical Physics.

## SOCIAL NEWS

SPORTS DAY 1973

This years Sports Day will be on FRIDAY 29 JUNE at the Civil Service Sports Ground, Chiswick, London.

It is hoped that as many players as possible will participate this year in the various sports.

Below is a list of sports, if you are interested please contact your representative shown below:

Football (Six-a-side)	- G Howard	Extension 6115
Cricket ) Chess )	- P Craske	Extension 232
Bowls	- N Ferguson	Extension 438
Netball	- Mrs M Stoker	Extension 270
Tennis (Mens and Mixed Doubles)	- P Craske	Extension 232

A decision will be taken later whether Table Tennis will take place. Helpers are also required including one umpire for cricket and scorers for tennis. Names must be in by 18 June at the latest. Don't forget your support is needed to make it a success.

HORTICULTURAL SOCIETY

The AERE Flower Show will be held on 13 and 14 September 1973. Anyone wishing to enter his garden for:-

1 The Best and Best kept Garden

or

2 The Flower Garden of the Year

should ensure that their entries are submitted to R S Brabben, R20, Rutherford Laboratory, by Friday 29 June 1973.

FOLK CLUB

RUTHERFORD FOLK CLUB - Friday 1 June at 8 pm in the Restaurant Coffee Lounge - presents "ARM PIT JUG BAND" (5 lads all playing various instruments including Banjo, Mandolin, Guitar etc). A good evening to be had by all. Don't forget we are licensed too.

AERE ANGLING CLUB

A proposal to open the coarse fishing season on the AERE pits at Sutton Courteney on the 26 May 1973 was carried at the AGM. Any member of the Recreation Association may join the Angling Club which has some of the best tench fishing in the area. About five 6½ lb tench, one 19 lb pike and one 23 lb carp were landed last season. For information please contact the Secretary, Brian Mack, Rutherford Laboratory.

CHRISTIAN FELLOWSHIP

Friday 8 June, 12.30, Conference Room, R12. Ernie Newbold will be leading the monthly prayer-meeting. All are welcome to attend.

A THANKYOU MESSAGE

Delia Patchett wishes to thank all those she was unable to see personally for the gifts and messages of good luck.