



Rutherford
Laboratory

R(12), NDT(60,3), ISW(3500), ANGLE(60), YINT(60), DUMMY(84),
(6,3), NACHT(48), XCEN(12), YATCH(2), 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), IB(100,2), IDX(
DY(100,2), JDX(4), JDY(4), IHS(4), IDV(2), IUN(2), IDEL(1), IDE
CF(16), IFS, NFS, FX, FY, JK, PIC, KPIC, NCOUNT, NBIN, MAXOV, KUN
AXN, CTA, CTB, MX, MY, JA, JB, JC, JD, JE, JF, XF(20,3), YF(20
MMON/CJACK/NSY(20,30), NMS(20), NDR(20), NSB(20), YAL(1), YA
(20), BX(20), NST1(20), NST2(20), INER(20), INER(20), INER(20), INER(20)

5-12 February 1973

5
bulletin

RUTHERFORD LABORATORY LECTURE

Dr D T N Williamson, Research Director of Molins Ltd is the next speaker in the Rutherford Laboratory Lecture series. His talk entitled "The Future of the Mechanical Engineering Industry" will be at 3.15 pm on Thursday 8 February, in the Lecture Theatre and we are grateful to Dr Williamson for the following abstract:

'Manufacture is central to our way of life and is our primary source of wealth as a nation. Our current and future welfare depends on its success, and it has for a long time been obvious that we are not succeeding as well as other industrial countries. The mechanical engineering industry is the mainstay of this manufacturing complex, and it also is failing to make the grade. The reasons for this are deep-rooted and are not being corrected by any of the currently envisaged processes of change. This talk outlines the situation and suggests ways of improvement.'

(To anticipate a number of questions - YES, it is the same man. He designed the very famous post war high quality amplifier and the Editor knows of several still working.)

GOING FOR A SONG?

At 11.00 on Friday, 3 October 1969, in the company of many past and present P L A "old sweats" the Director, ably assisted by John Dickson, switched of the P L A for the last time. Thus ended the working life of the first accelerator at the Rutherford Laboratory, a period of nine and a half years of medium energy physics.

It was in 1955 that installation began, the first twenty feet (Tank 1) producing a 10 MeV beam in late 1958, Tank 2 raising the energy to 30 MeV in May 1959 and with Tank 3 coming into operation the design figure of 50 MeV was reached in July of the same year.

But to many of the 'old sweats' it has become a case of 'the king is dead, long live the king' as Tanks 2 and 3 will live again. As reported recently the new 70 MeV injector for Nimrod will incorporate Tanks 2 and 3 from the P L A, but what about that first twenty feet. Well, sad to report Tank 1 is now lying around unloved and unwanted so if anyone requires an excellent vacuum tank, ideal for many jobs around the house, this is your chance. It is actually 19 ft 3 ins long, 5 ft in diameter and weighs a mere 4 tons.

If anyone is interested in obtaining this tank they are asked to contact the Stores Officer at the Rutherford Laboratory.

FILM BADGE NOTICE

It is Period 2. Colour Strip - GREEN for Bγ films and neutron packs. Please check that you are wearing the correct dosimeters and that all old ones are returned.

MISSING EQUIPMENT

An optical microscope, Serial No 12422, has been reported missing from Building R34. Anyone with information on the present whereabouts of this item is asked to contact Mr D Evans, Extension 297.

THE RUTHERFORD SCENE

From time to time it is intended to publish a series of short articles, complementary to the existing lead articles, on various items and happenings at the Rutherford Laboratory. However unlike the lead articles, these short articles need not necessarily be concerned with current happenings. It is hoped that this series will provide interesting information on some aspects of Laboratory life which we may see every day but for one reason or another, know little about. Hence the title for this series is to be:-

SCENE BUT NOT HEARD!

The Editor would be pleased (and astonished) to receive copy from any member of the Laboratory who may feel that he has something of interest to put across in this series. Please keep contributions to about 400 words.

EXTERNAL COURSE

The Department of Construction, Oxford Polytechnic have arranged a short course on Non-Destructive Testing, from Wednesday 30 May to Friday 1 June 1973. Amongst the subjects covered are Radiography, Ultrasonics, Eddy Current Testing, Magnetic Ink and Dye Penetrant Methods, Acoustic Emission, Significance of Defects, Fracture Mechanics etc.

news continued on page 4

INTERNAL EVENTS

NIMROD LECTURE SERIES

Monday 5 February
11.30
Lecture Theatre

π^+p Elastic and $\pi^+p \rightarrow \Sigma^+ \kappa^+$ Scattering in the Backward Direction using a Polarised Target

Dr F Bradamante/CERN

TRADE EXHIBITION

Tuesday 6 February
10.00 - 16.00
R25 Car Park

The Fluke International Corporation's mobile exhibition will be at the Laboratory to demonstrate a wide range of products both of their own manufacture and also of other firms whom they represent. These include, a complete range of digital voltmeters; voltage calibrators; high voltage and, programmable P U's; function and sweep generators; and it is hoped a very small lightweight battery operated portable oscilloscope. Peter Minhinnett will be in attendance

HEP DISCUSSION GROUP

Wednesday 7 February
11.00
Conference Room, Building R1

Backward πN Scattering

S Winbow/DNPL

FILM SHOW

Wednesday 7 February
13.15
Thursday 8 February
12.40
Lecture Theatre

Shadows of Bliss - approximately 50 minutes, colour

Written, narrated and produced by Denis Postle of Tatooist International Ltd, this controversial film was first shown on the BBC Horizon programme on 2 November 1972. In an effort to explain high energy physics to the layman, Denis Postle uses a young poet and singer, Jeremy Newsom as the innocent abroad who asks all the difficult questions and often appears to be satisfied with difficult answers. Most of the film was shot at CERN although the Albert Hall was used to illustrate atomic structure. Arguments 'for' and 'against' were voiced on November 3 so here is a chance to see it in big screen and colour (for the minority who still watch the box in monochrome!) and it will be interesting to hear the lunch time coffee lounge arguments as to whether the 'fors' and now 'against' or vice versa. Anyhow its all good fun and there are some interesting shots of CERN, and Albert's Hall.

RUTHERFORD LABORATORY LECTURE

Thursday 8 February
15.15
Lecture Theatre

The Future of the Mechanical Engineering Industry (see page 1 for details)

Dr D T N Williamson/Research Director, Molins Ltd

NIMROD LECTURE SERIES

Monday 12 February
11.30
Lecture Theatre

Barrelet Zeros and Resonance Ambiguities in $K^+p \rightarrow \Lambda \pi^0$

Dr A J Van Horn/RHEL

NIMROD SCHEDULES

CYCLE 2 23 1 73 - 11 2 73

MACHINE PHYSICS

HIGH ENERGY PHYSICS

Team	Beam	Experiment	State
BRISTOL UNIVERSITY/ SOUTHAMPTON UNIVERSITY/ RHEL	K15	π^+p Differential Cross-Sections	Data
GLASGOW UNIVERSITY/ RHEL	π^9	π^+p Differential Cross-Sections	Data
IMPERIAL COLLEGE/ SOUTHAMPTON UNIVERSITY	π^7	Studies of n w and A2	Data
CHURCHILL HOSPITAL/ BART'S MEDICAL COLLEGE/ RHEL	π^{11}	Radiobiological Experiments	Data

RUTHERFORD LABORATORY BULLETIN

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Editor: H F NORRIS

Deadline
for
Insertions

GENERAL & SOCIAL NEWS

INTERNAL & EXTERNAL EVENTS

Tuesday 1600

Wednesday 1200

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

EXTERNAL EVENTS

NUCLEAR STRUCTURE & NUCLEAR ASTROPHYSICS SEMINAR

Monday 5 February
14.30
Nuclear Physics Lab., Oxford

The Nuclear Structure CAMAC System

Mr B E F Macefield/Nuclear Physics Lab, Oxford

THEORETICAL PHYSICS SEMINAR

Monday 5 February
16.15
Queen Mary College, London

Short Distance Behaviour in a Massive Thirring Model

Professor T L Trueman/Brookhaven and Oxford

PHYSICS & GEOPHYSICS COLLOQUIUM

Monday 5 February
17.00
University of Bristol

Electronic Excitations in Polymers

Dr E G Wilson/QMC

PHYSICS COLLOQUIUM

Monday 5 February
17.00
University of Reading

The Structure of Molecular Liquids by Neutron Scattering

Professor J G Powles/University of Kent

DARESBUARY LECTURE SERIES

Tuesday 6 February
14.00
Daresbury N P Laboratory

Polarised Electroproduction - the Next Step

F Close/DNPL

NUCLEAR PHYSICS SEMINAR

Wednesday 7 February
14.30
King's College

The Prospects of Controlled Thermonuclear Reactions

Dr J H P C Megaw/Culham Laboratory

THEORETICAL PHYSICS SEMINAR

Wednesday 7 February
14.30
University of Manchester

Deuteron Break-Up Contribution to Elastic Deuteron - Nucleus Scattering

Professor G Rawitscher/Connecticut

THEORETICAL ASTROPHYSICS SEMINAR

Thursday 8 February
14.30
Dept of Astrophysics Oxford

Strong Waves and Relativistic Plasmas

R D Blandford/IOA Cambridge

THEORETICAL PHYSICS SEMINAR

Thursday 8 February
16.15
Clarendon Laboratory Oxford

Quasi-Particle Methods in Nuclear Spectroscopy

Dr J A Evans/Sussex

ELEMENTARY PARTICLE THEORY SEMINAR

Friday 9 February
14.15
Nuclear Physics Lab, Oxford

Quantum Chiral Dynamics

Dr J Charap/QMC

COLLOQUIUM

Friday 9 February
16.15
Clarendon Laboratory Oxford

The Pugwash Conference on Science and World Affairs

Professor Sir Rudolph Peierls/Oxford

THE 'DEADLINES BOX' IS ON PAGE 2 THIS WEEK OWING TO LACK OF SPACE ON PAGE 3. HOWEVER THE TEMPORARY CHANGE MAY REINFORCE LAST WEEKS NOTE ON MEETING 'DEADLINES' IN FUTURE.

EXTERNAL COURSE contd

The course fee is £15. For further information please contact Training Section.

PIONEERING PHYSICIST TO RETIRE

Dr Edwin M McMillan has announced his plans to retire as Director of Lawrence Berkeley Laboratory at some time towards the end of 1973. Amongst Dr McMillan's scientific achievements are two of major proportions. One was the discovery, with P H Abelson, of element 93 (neptunium) and the co-discovery of element 94 (plutonium) for which he shared the Nobel Prize in Chemistry with Dr Glenn T Seaborg in 1951. The other was the independent discovery of the theory of phase stability, a concept that made giant modern accelerators possible and for which he shared the 1963 Atoms for Peace Prize with the Soviet scientist, the late V I Veksler.

OVERSEAS VISITS

The Director, to CERN, 6 - 7 February, to attend meeting of Nuclear Physics Research Committee.

Dr G Manning, to CERN, 6 - 14 February, to work on ISR project.

Mr A T Gresham, to CERN, 6 - 8 February, to discuss inorganic insulation of magnets.

The following members of staff will visit Saclay on the dates indicated, to attend the GESSS collaboration meeting on Pulsed Superconducting Magnets for High Energy Accelerators:-

Mr G H Rees & Mr M R Harold, 4 - 5 February; Mr M N Wilson, 5 - 7 February;
Drs D B Thomas, R W Newport, C Scott, J Coupland, D Baynham, Messrs P T Clee,
B Colyer, and G Stapleton, 5 - 9 February; Mr M Snowden, 5 - 10 February.

SOCIAL NEWS

RECORD SOCIETY

Tuesday 6 February, 12.40 in the Lecture Theatre

Violin Concerto in D Minor - Sibelius

Tosy Spivakovsky is the soloist with the London Symphony Orchestra conducted by Tauno Hannikainen playing one of the two finest violin concertos to be produced in the first decade of this century. This is a work of some complexity and is indeed music for the virtuoso.

FOLK CLUB

As announced in last week's Bulletin the next club night is on 2 February at 8 pm in the Coffee Lounge. The special guest artist is in fact 'Staverton Bridge' a group who play a varied collection of instruments and have appeared on TV and radio. Admission 25p.

SEVEN-A-SIDE SOCCER

The date for the final of the Rutherford Challenge Trophy has been fixed for Friday 9 February, kick-off at 12.45. Spectators are very welcome.

CHRISTIAN FELLOWSHIP

All welcome to join in a book review led by Meyrick Wyard of R18. The meeting commences at 12.30 on Friday 9 February in the R12 Conference Room.

CHESS NEWS

After 7 rounds Bill Turner has a clear lead of one point; he now has a total of 6½. Jim Riddle, Peter Craske and Peter Hemmings have 5½ points and Alan Gilby, Shobod Chanda and Bob Maybury have 5 points.

Round 7 proved to be the crucial round, Bill beat Jim Riddle and Peter Craske drew with Shobod Chanda. With only two rounds to go and having played most of the leading challengers below him Bill is in a strong position. This round it is the turn of Peter Hemmings to try and lower Bill's colours.

A GOLFING STORY TO END WITH - AND ITS TRUE!

The Frilford Heath golf club is about 65 years old. Last Sunday Ron Wimblett became as far as it can be traced the first player to hole out in one on the 190 yard second hole. Ron who was playing a foursome is now entitled to wear a special tie and cuff-links. What happened at the nineteenth hole has not been divulged! We offer our congratulations to Ron on this great achievement - certain other golfers must now look to their laurels.