



Rutherford
Laboratory

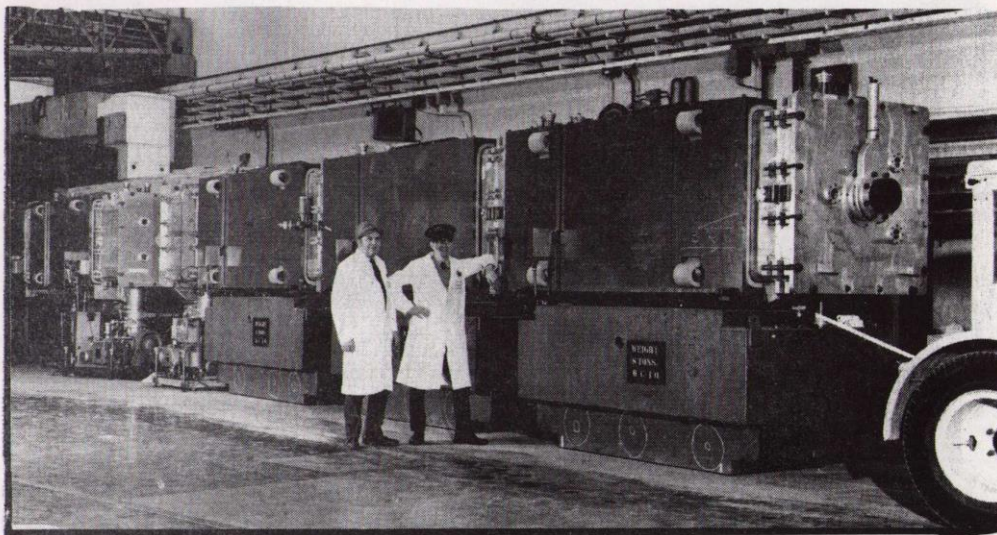
R(12), NDT(60,3), TSW(3500), ANGLE(60), YINT(60), DUM(100,3),
(6,3), NDT(100,3), YCFN(2), TC(100,3), AR
MMON/CFID/MFX(20,3), MFY(20,3), NFDX(10,3), NFX(3), NFD(3), I
B(2,20,3), NX(100,4), NY(100,4), XN(2), YN(8), TB(100,2), DX(100,2),
DY(100,2), JDX(4), JDY(4), PHS(4), IDV(2), IUN(2), IDEL(16), IDE
CF(16), IFS, NFS, FX, FY, JK, PIC, KPIC, NCOUNT, NBIN, MAXDV, XUN
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), N(16), YA
(20), BX(20), NST1(20), NST2(20), INER(20), NSX(20,30), AWT(60)

29 January - 5 February 1973

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THE TRAIN NOW STANDING
AT.....

Bob Gover (he always
wears that hat) and Bill
Lord (with the borrowed
peaked cap) standing by
the K9 Beam Line
Separator Train



So at last the longest serving beam line, K9, has gone to its own Valhalla. K9, mainly designed by Bill Neale (then at Imperial College, now at Cambridge) to give a variety of particles at various energies, was fully installed by the end of March 1967. Commissioning was scheduled for Nimrod Cycle 7, 4 - 25 July, that year and testing continued up to and after the annual shutdown in October and November.

In January 1968, a University of Cambridge experiment (No 30) was set up and about 40,000 pictures taken: an Imperial College/Westfield College team was also scheduled in Cycle 1 that year.

During its lifetime, K9 was used for eleven experiments resulting in a total of 4,077,000 bubble chamber pictures and provided a variety of particle beams e.g. π^+ at 0.8 - 4 GeV/c; π^- at 1 GeV/c; K^+ at 2.2 - 2.9 GeV/c; e^+e^- at 1 GeV/c; p at 2 GeV/c and p at 7 GeV/c.

The K9 beam line was put onto computer control during its last 14 months and a description was given in Bulletin No 45 1971. Tuning of its successor, K19, is due to start in May this year.

To end perhaps a story can be told of an 'incident' and a bit of detection work. From the acceptance diagrams from which the behaviour of a beam can be seen, it was diagnosed that there was an obstruction in the K9 beam line. As it moved every time a certain beam line element was switched on an off, it was deduced that it must be made of steel. It was in fact a 3 ft steel rule lying inside the beam tube of one of the bending magnets - it was never claimed!

FIRST MILLION

Since HPD1 became operational in 1968 it has measured one million 3-view bubble chamber events. Nearly all of these have been from the CERN 2 metre chamber.

On Tuesday this week HPD2, for the first time, measured a few hundred events from the same chamber. For the previous four months it had been measuring spark chamber film (112,000 events) mainly from the I S R experiment.

USE OF THE 'BLUE' EXTERNAL VEHICLE PARK

The BLUE vehicle park (at the south side of the site) is for the sole use of Laboratory staff and registered visitors who are accommodated or spend a large proportion of their time in the Nimrod area (Buildings R2, R3, R4, R5, R6, R7, R8, R51, R53 and R55).

Parking discs for display on windscreens of those vehicles authorised to use the BLUE vehicle park are available from the Administration Office in Building R2. Parking discs are not transferable. Vehicles not authorised to use the BLUE car park must use the other external vehicle parks.

news continued on page 4

INTERNAL EVENTS

NIMROD LECTURE SERIES

Monday 29 January
11.30
Lecture Theatre

Proton - Proton Scattering at all Angles

Professor J Tran Thanh Van/Orsay

HEP DISCUSSION GROUP

Wednesday 31 January
11.00
Conference Room, Building RI

Results on Some Inclusive Reactions in the 14 GeV/c K^-p Experiment

Dr K Paler/RHEL

FILM SHOW

Wednesday 31 January
13.15
Thursday 1 February
12.40
Lecture Theatre

Art: What is it? Why is it? - a 30 minute colour film

The film begins by posing the question, "Why have men always wanted to paint or carve imitations of things in the world?" It then considers the development of art from that of prehistoric man, to landscape painting which came into its own in the 17th century. The ensuing interest in society and everyday things indicate man's explorations of his own nature, which in the end may be the source of all art.

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 Polarized Target

Dr F Bradamante/CERN

NIMROD SCHEDULES

CYCLE 2 23 1 73 - 11 2 73

MACHINE PHYSICS

HIGH ENERGY PHYSICS

<u>Team</u>	<u>Beam</u>	<u>Experiment</u>	<u>State</u>
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 η ω and A_2	Data
CHURCHILL HOSPITAL/ BART'S MEDICAL COLLEGE/ RHEL	π^{11}	Radiobiological Experiments	Data

EXTERNAL EVENTS

NUCLEAR STRUCTURE & NUCLEAR
ASTROPHYSICS SEMINAR
Monday 29 January
14.30
Nuclear Physics Lab, Oxford

Report on a Recent Visit to some U S Laboratories

Professor K W Allen/Oxford

THEORETICAL PHYSICS SEMINAR
Monday 29 January
16.15
Queen Mary College, London

Reduced Thermal Conductivity of Dielectrics

Dr S Simons/Queen Mary College

THEORETICAL PHYSICS SEMINAR
Wednesday 31 January
14.30
University of Manchester

Laser Light Scattering in Polymers

Dr J Shepherd/Manchester

APPLIED PHYSICAL SCIENCES
COLLOQUIUM
Wednesday 31 January
16.30
University of Reading

Electroless Plating

J P Levy

THEORETICAL ASTROPHYSICS
SEMINAR
Thursday 1 February
14.30
Dept of Astrophysics, Oxford

A Local Treatment of Radiation Reaction in General Relativity

Dr G Dixon/Cambridge

APPLIED MATHEMATICS SEMINAR
Thursday 1 February
14.30
Royal Holloway College

Many Particle Production Processes

Professor E Squires/Durham

THEORETICAL PHYSICS SEMINAR
Thursday 1 February
16.15
Clarendon Laboratory, Oxford

Topological Order and Phase Transitions in Two Dimensions

Dr J M Kosterlitz/Birmingham

COLLOQUIUM
Friday 2 February
16.15
Clarendon Laboratory, Oxford

Old and New Vistas in High Energy Physics

Professor D H Perkins/Oxford

EVENTS AT AERE

NUCLEAR PHYSICS COLLOQUIUM
Thursday 1 February
15.30
Conference Room, Hangar 8

Laser Driven Fusion

Dr N J Peacock/Culham Laboratory

RUTHERFORD LABORATORY BULLETIN

Published by the Scientific Administration Group

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

FILM BADGE NOTICE

Period 2 commences Monday 29 January. Colour Strip - GREEN for B_y films and neutron packs. Please change films promptly and return all old ones.

Six monthly TLD change for people with surnames commencing E, F, G, H.

A THANK YOU AND AN INVITATION

Nora Henderson sends her thanks to everyone who contributed to her farewell present especially to those she was unable to see before leaving. She continues "if any of my colleagues are in Brixham then a cream tea will always be forthcoming. Thanks again and best wishes to all".

LOST PROPERTY

A Gents scarf was found in the BLUE car park on Tuesday. Owner please contact Mrs C E Smith, R1, Ext 6693.

BULLETIN NOTICE

Production difficulties are being experienced owing to the late arrival of items for insertion in the Bulletin. The deadlines are printed each week at the bottom of page 3 and are repeated below this paragraph for greater emphasis. In future these deadlines will be strictly adhered to and items arriving late will be held over until the following week.

RUTHERFORD LABORATORY BULLETIN		Published by the Scientific Administration Group	Editor:	H F NORRIS
Deadline for Insertions	GENERAL & SOCIAL NEWS	INTERNAL & EXTERNAL EVENTS	Room 42	Building R20
	Tuesday 1600	Wednesday 1200	Rutherford Laboratory	Chilton Didcot Berks
			Abingdon 1900	Ext 484

OVERSEAS VISITS

Mr D R Quarrie, to CERN, 28 Jan - 9 Feb, for modifications to ISR experiment.

Mr C Maclean and Mr G M McPherson, to CERN, 29 Jan - 2 Feb, for testing and installation of special purpose computing equipment on S120 experiment on the PS.

Dr C M Fisher, to CERN, 30 Jan - 1 Feb, to attend TCC meeting and discussions for Track Sensitive Target experiment.

Mr L Phillips, to the USA, 1 Feb for approximately three weeks, for installation of beam line equipment for Oxford-Harvard-Chicago Muon experiment at NAL Batavia.

SOCIAL NEWS

RECORD SOCIETY

Tuesday, 30 January, 12.40 in the Lecture Theatre.

Chopin Piano Music : Polonaises and Mazurkas played by Menahem Plessier.

CHRISTIAN FELLOWSHIP

All welcome to attend a prayer-meeting led by Ben Kingdon in the Conference Room R12 at 12.30 on Friday 2 February.

LATE CHESS NEWS

Bill Turner beat Jim Riddle which puts Bill on 6½ points and in the only match played so far in the seventh round Alan Gilby won putting him amongst the leaders with 5 points.

MODEL RAILWAY CLUB

Work will be proceeding most days with the exception of Thursdays, for the time being on construction of base boards etc for the Club layout. Contact Ray Roberts on Ext 254 for information.

RUTHERFORD FOLK CLUB

The Folk Club now meets monthly, the next date being Friday 2 February in the Restaurant Coffee Lounge starting at 8 p.m. A special guest artist will appear so bring all your friends, admission 25p.