



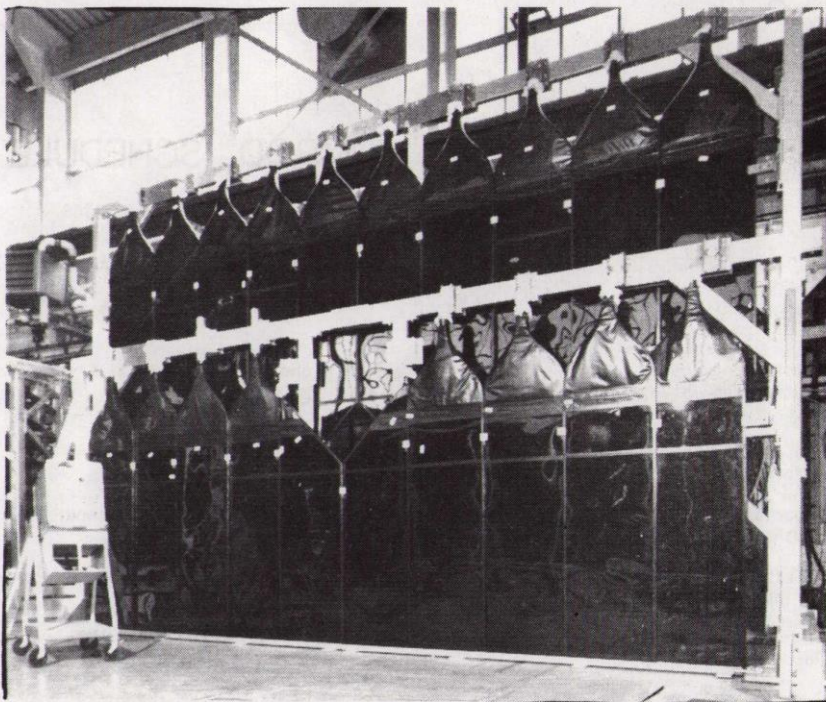
Rutherford
Laboratory

R(12), NDT(60,3), ISW(3500), ANGLE(60), Y(NT(60), DUMMY(84),
(6,3), NACH(3), CF(10,3), FN(3), N(6), AR
MMON/CFID/MFX(20,3), NFY(20,3), NFX(10,3), NFD(3), I
B(2,20,3), NX(100,4), NY(100,4), XN(2), YN(8), IB(100,3), IDX(
DY(100,2), JDX(4), JDY(4), IHS(4), IOV(2), IUN(2), IDE
CF(16), IFS, NFS, FX, FY, JK, PIC, KPIC, NCOUNT, NBIN, MAXUN
AXN, CTA, CTB, MX, MY, JA, JB, JC, JD, JE, JF, XF(20,3), F(3)
MMON/CJACK/NSY(20,30), NMS(20), NDR(20), NSY(20), Y(60), YA
(20), BX(20), NST1(20), NST2(20), INERT(20), NSX(20,30), AWT(60)

28 August-11 September 1972

bulletin 28

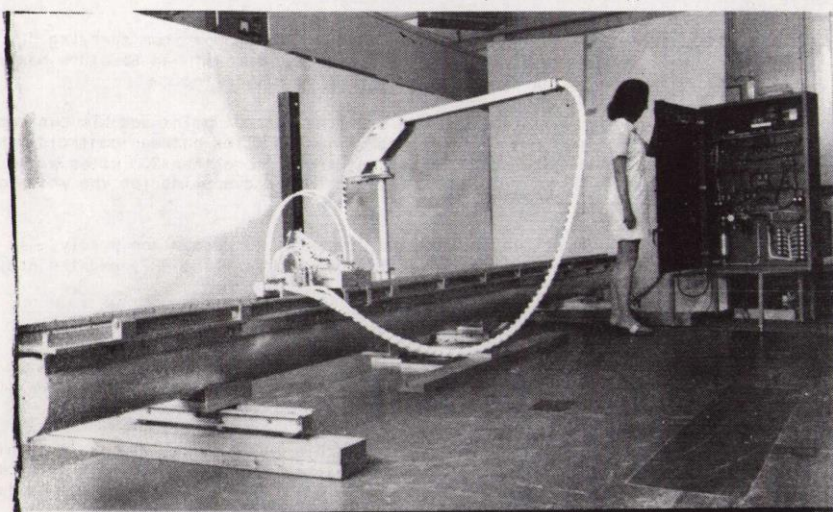
200 GeV NUCLEAR PHYSICS



Halo Scintillation Counter

The Rutherford Laboratory is supporting the University of Oxford in an experiment on the new 200 GeV proton synchrotron at the National Accelerator Laboratory in Chicago. Oxford are collaborating with the University of Chicago and Harvard University in a study of inelastic muon-proton scattering. Oxford and the Rutherford Laboratory have designed and manufactured, amongst other equipment, four large scintillator hodoscopes, the size and complexity of which give an indication of the sort of equipment the Laboratory will be dealing with when we have experiments mounted on the new 300 GeV synchrotron at CERN.

The Laboratory have also supplied a field survey machine for plotting the magnetic field of the large magnet that was previously part of the Chicago cyclotron but will now be used as a spectrometer magnet. This device measures in three planes over a space volume of 29 ft diameter by 4 ft high incorporating an automatically operated electro-pneumatic indexing system for correct positioning of a Hall probe to within 0.005 inch. The number of measured positions will be 60,000 in the above volume. Indexing will be automatic, the field measurements will then be fed into a computer to plot field patterns and recorded on magnetic tapes. All the above equipment has been pre-assembled and tested.



Magnetic Field Survey Apparatus

more news on page 4

INTERNAL EVENTS

NIMROD LECTURE SERIES

Wednesday 30 August

11 30

Lecture Theatre

Absorptive Corrections to OPE Amplitudes in Inclusive Reactions

Professor U Maor/University of Tel Aviv

NIMROD LECTURE SERIES

Monday 4 September

11 30

Conference Room, Building R1

New Results on Inclusive Reactions from the CERN Intersecting Storage Rings

Professor P Murphy/University of Manchester

NIMROD SCHEDULE

CYCLE 10.8 8 72 - 29 8 72

MACHINE PHYSICS

HIGH ENERGY PHYSICS

Team	Beam	Experiment	State
Glasgow University RHEL	✓ $\pi^+ N_4$	Polarisation Measurements in $\pi^+ p$ Charge Exchange	Setting up
Bristol University Southampton University RHEL	✓ K15	$K^+ p$ and $\pi^+ p$ Differential Cross-Sections	Data
Churchill Hospital Oxford RHEL	✓ π^{++}	Radiobiological Experiment	Data
Imperial College Southampton University	$\pi^+ 7$	Studies of n ω and A_2 mesons	Data and parasitic
RHEL/UCL/Berkeley/ Torino	K9	4 GeV/c $\pi^+ p$ interactions in track sensitive target	Data
Cambridge University RHEL	✓ K13C	Associated Production Cross-Sections	Parasitic
Imperial College	K12A	Calibration of K^+ detectors	

* * * * *

A "GOLD" AT FIRST ATTEMPT

Sid Axford, at his first attempt, won a gold in this year's ACU National Rally. For the benefit of the non motor cycling fraternity a brief description of the rally may be of interest.

The Auto-Cycle Union's National Rally is unique in the motor cyclist's calendar as there is no other such event held in this country and probably not in the world.

The rules are simple and anyone can enter providing they have passed the driving test or are exempt from carrying "L" plates. The rally, run over a period of 24 hours, has many classes with various distances, but with an absolute maximum of 600 miles. One mark is earned for each mile covered and two marks for each control point visited.

Throughout the country there are 81 control points and each rider plans his own starting control point and his own route and tries to visit as many controls as possible. However he may not (a) cover more than 50 miles between controls (the minimum distance is 15 miles), (b) call at a control more than once and (c) must not travel more than 200 miles without resting for at least one hour. The maximum average speed is 25 mph including rest periods and applies for the whole of the run and not control to control.

This year's event started at 10.00 a.m. on 8 July and finished at Cheltenham Race Course at 10.00 a.m. on 9 July. It drew 876 entries including teams and riders from the Metropolitan Police, several County Forces, the RAF, and the Army apart from numerous motor cycle clubs.

Entry number 480 was S J Axford, 350 cc Triumph, of the North Berks Motor Cycle and Light Car Club.

Sid Axford joined AERE in 1955 and came over to the PLA in (he thinks) 1957 or 1958 and now works in the Mechanical Services Section R9. He is a committee member of the North Berks Club and has a life long interest in motor cycles with one guess, more pleasure in rebuilding motor bikes than in riding them.

However this year, for the first time, he decided to enter the National Rally, riding his 1960 350 cc Triumph, a machine he bought for £5 and then completely rebuilt. Sid chose Warminster as his starting point, visited 31 controls and completed 560 miles all in pouring rain, earning a total of 622 marks, (600 points for a gold). His route took him as far South as Wimbourne, East to Stevenage and North to Wolverhampton.

So riding with many very experienced competitors with many mounted on machines costing up to £1,300, Sid aged 52, on his first attempt and in foul weather conditions won his gold, a noteworthy effort for both rider and his £5 bike. Next year - well, he thinks he will attempt to win one of the premier awards. Maybe he will be riding another of his rebuilt machines, a 1937 Rudge Ulster (a famous prewar name) which he found in a farm yard barn and acquired for £8.

SOCIAL NEWS

RUTHERFORD SEVEN-A-SIDE CHALLENGE SHIELD

We open the 1972/73 season with a new competition the first game of which will be played on Tuesday, 5 September. The Rutherford League would like to take this opportunity to officially extend a welcome to the four AERE teams competing for the first time for a Rutherford Trophy. May the best team win.

Each competing team has been placed in one of the following Groups:-

Group "A"		Group "B"	
1	A E R E 351	1	Transport
2	R.18	2	A E R E Admin
3	A E R E Group Office	3	Stores
4	Computer Applications Div or C.A. Div	4	A E R E 220
5	R.9	5	D.O.
6	Hall 3	6	R.25
7	Atlas	7	Casuals

When each team has played all the other teams in its respective group, the top four teams in each Group will then go forward to quarter finals thence to semi finals and final. If there are any drawn games from the quarter finals onward the games must be replayed until a positive result is reached.

The following matches will be played on the dates stated unless weather conditions make it otherwise impossible.

Tues. 5th Sept.	Casuals	v	R.25	Group "B"
Wed. 6th Sept.	A E R E G.O.	v	R.18	Group "A"
Thur. 7th Sept.	R.9	v	Atlas	Group "A"
Fri. 8th Sept.	Transport	v	Stores	Group "B"
Tues. 12th Sept.	A E R E 220	v	D.O.	Group "B"
Wed. 13th Sept.	C.A. Div.	v	A E R E 351	Group "A"
Thur. 14th Sept.	R.25	v	A E R E Admin	Group "B"
Fri. 15th Sept.	R.18	v	R.9	Group "A"

Brian Prior has consented to officiate whenever possible; this gives the competition the high standard and impartial refereeing he has set in the past. Also we must thank Bill Butler for his touch line "First Aid" services both past and future. Thank you Bill.

The Official Presentation of the Rutherford League Cup and medals to R.18, the 1972 League Champions, will be made before the game on Wednesday, 6th September at approximately 12.30 p.m. on the Football Field.

CHESS CLUB - LOOKING FOR A NEW BOBBIE?

The 1972/73 chess season will be starting in October and we hope to publish details of the forthcoming programme shortly. In the meanwhile anyone interested in Chess should contact Mr P Craske X232, Building R2.

CHRISTIAN FELLOWSHIP

Friday, 1 September - Ben Kingdom will be leading our monthly prayer meeting commencing at 12.30 pm in the R12 Conference Room. All are welcome to come along.

Friday, 8 September - Dennis Williams will be leading a Bible Study on 2 Corinthians Chapter 12. All are welcome to attend at 12.30 pm in the R12 Conference Room.

RUTHERFORD LABORATORY BULLETIN

Published by the Scientific Administration Group

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

**HARKNESS FELLOWSHIPS OF THE
COMMONWEALTH FUND OF NEW
YORK 1972/73**

Harkness Fellowships are awarded by the Commonwealth Fund of New York, an American philanthropic foundation, to a limited number of exceptional young men and women offer them the opportunity to further their education while becoming familiar with the people and culture of the United States. Further details of the Fellowship may be obtained from Training Section or see SRC Training Notice 3/72, on notice boards

**LEVERHULME FELLOWSHIPS
1972/73**

Two Leverhulme Fellowships are being offered by the Leverhulme Trust Fund (for men and women primarily between the ages of 30 and 45) to enable Civil Servants and Staff of the Research Councils of the rank of Principal or Assistant Secretary or the equivalent grades in the Executive, Professional, Scientific and Technical Classes to become better acquainted with the administration, problems and experience of countries in Europe, the Middle East, South East Asia and Latin America.

Further details of the Fellowship and application forms may be obtained from the Training Section. Applications must reach Training Section by Friday, 16 October.

Special leave will be granted to the successful applicant, who will be required to provide the Council with a report on his activities and also give an undertaking to return to SRC for at least two years after the conclusion of his Fellowship.

SRC SUGGESTION AWARD SCHEME

At a meeting of the Local Suggestion Awards Committee held on Friday, 18 August, the following awards were made:-

Mr N R Goddard	Nimrod R55	- £30
Mr W Higgins	" R24	- £10
Mr E G Starr	" R3	- £10
Mr H Sangster	" R43	- £25
Mr H McGarth	Engineering R18	- £10

In the previous list of award winners (see Bulletin No 27) Messrs J Rouse and B Keen were shown as working in Nimrod R2; they are however both members of the Administration Division. We apologise for the error.

MISSING EQUIPMENT

The following item of equipment has been reported missing

Avometer Model 8, Serial No. 124155-661

Anyone with information for the present whereabouts of this instrument is asked to contact Mr F R Jacob, Building R1, Ext. 6255.

FILM BADGE NOTICE

It is Period 9. Colour Strip - ORANGE for 8y films and fast neutron packs. Period 10 commences Monday, 4 September, when it will also be the six monthly TLD change for people with surnames commencing K, L, M, N.

OVERSEAS VISITS

Mr P Bowles, to CERN, 26 - 30 August for discussions with 300 GeV Groups.
Mr E J D Newbold, to CERN, 28 Aug - 11 Sept to check RL equipment held at CERN.
Dr W A Smith, to Poznan, Poland, 28 August - 1 September to attend Fifth International Symposium on Discharges and Electrical Insulation in Vacuum, and to give one of the five invited papers.
Mr H Hadley and Mr K H Davies, to Italy, 31 August - 16 September, to attend Tenth ESRO Summer School on Project Management and Control, at Esrin.
Dr G G Ross, to CERN and Bratislava, 2 September - 1 October for discussions.
Dr G Manning, to the USA, 3 - 29 September, to attend Chicago Conference and to visit and have discussions at other Laboratories.
Dr G Ringland, to the USA, 3 - 30 September, to attend NAL Conference and to visit ANL, NAL, BNL, Cal Tech, and LBL for discussions.
Mr N M King and Mr M R Harold, to CERN, 4 - 7 September to attend meetings of 300 GeV Beam Diagnostic Study, and GESS Machine Design Working Group.
Mr M J Hotchkiss, to CERN, 4 - 8 September, to work on S120 Experiment apparatus.
Mr J Jenkins, to CERN, 4 - 9 September, for annual asset and inventory inspection.
Dr D P Jones, to CERN, 5 - 21 September, for work on S124 Experiment.
Dr A Astbury, to the USA, 5 - 23 September, to attend NAL Conference and to visit SLAC, Berkeley and BNL.
Dr P J Litchfield, to CERN, 6 - 9 September, for data taking on 2 metre chamber for low energy K⁺ experiment.
Dr W A Smith and Mr F Atchison, to CERN, 6 - 9 September, to assist in commissioning separated beams.
Dr W S Chapman and Dr D Maden, to Austria, 10 - 24 September to attend 1972 CERN Computing and Data Processing School at Pertisan.