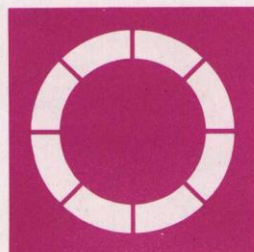


No 31/70
7 Sept 70



Rutherford Laboratory Bulletin

General News

BULLETIN NOTICE Weekly publication is resumed with this issue. Information for inclusion in the Bulletin should be sent to the Editor, H F Norris, Room 42, R20, Ext 484, by mid-day on Wednesdays. Late items by 5.0 pm on Wednesdays. Where possible, please send in written form.

EXTERNAL COURSES

- (1) Oxford Polytechnic are running a short course on "Integrated Circuits" during the Autumn term.
- (2) Reading College of Technology have announced the following short courses - "Computer Applications in Engineering", commencing 28 September; "Electronics for Mechanical Engineers", evening course commences 12 October and day course commences 13 October; "Introduction to Industrial Instrumentation" - commencing 29 September; "Computer Programming in Algol" - commencing 6 October; "An Introduction to Electronics" - commencing 13 October- "Educational Technology and Audio Visual Aids" - commencing 29 October. "Servos and Control Systems" - commencing 9 October.

Further information on any of these courses may be obtained from Training Section, R20, Ext 555.

ARRANGEMENTS FOR ATTENDANCE AT COURSES AND CONFERENCES (UK only) Applications should be made in future on Form N552 (green in colour) obtainable from Admin Offices. Completed forms should be sent to Training Section, Bldg R20.

LEVERHULME FELLOWSHIPS 1971/72 Two Fellowships are being offered to enable Civil Servants and staff of the Research Councils of the rank of Principal, Assistant Secretary and equivalent grades in other 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 information from Training Section, Bldg R20.

28 lb CARBON DIOXIDE CYLINDERS Will any person who has 28 lb carbon dioxide cylinders please contact Mr W Bond of Harwell Stores (Ext 4103). If you have had such cylinders in the past but are not presently using them, please check whether you still have the cylinders.

FILM NOTICE Period 10 commences Monday, 7 September. Colour Strip - LIGHT ORANGE for B_y films and fast neutron packs. Please change your films promptly and return all old ones. TLD change for people whose surnames commence KLMN. Please note that beginning with this issue, the TLD holders will be coloured white and yellow instead of grey.

HYDRAULICS RESEARCH STATION OPEN DAYS 1970 The Hydraulics Research Station at Wallingford is holding Open Days on the afternoon of Thursday, 24 September (2 - 5 pm) and all day Friday, 25 September (9 am - 5 pm). Anyone wishing to attend on either of these days for professional reasons (wives and children are not admitted) should contact H F Norris, R20, Ext 484, as soon as possible, so that tickets can be obtained.

STORES - RECEIPTS AND DESPATCH SECTION All services including Imports, Exports, and internal deliveries previously operated from Bldg R24 have been transferred to Bldg R56 - adjacent to Main Gate.

OVERSEAS VISITS Mr P Trowbridge, to Matra - Paris, 4 - 11 Sept, for discussions.

Dr I F Corbett, to CERN, 7 - 11 Sept, to attend Omega Project Meeting.

Mr H O Normington and Mr W Glasgow, to CERN, 6 - 9 Sept, to install computer caravan for pp Experiment.

Mr N M King and Mr D Maden, to CERN, 9 - 11 Sept, to attend 300 GeV Utilization Study Group meeting, Dr T G Walker will also attend this meeting but will depart for CERN on 10 Sept.

Machine Schedules

NIMROD Cycle 11 (1970 - 22970)
Machine Physics
High Energy Physics

| Team | Beam | Experiment | |
|---------------------|-------------|--|------------|
| Surrey/B'ham RHEL | π 10 | Total Reaction Cross-Sections for Pions on Nuclei | Setting up |
| B'ham/RHEL | X2/K12A | K^+ -n Elastic Scattering between 450 and 950 MeV/c | Setting up |
| Camb U/RHEL | X2/K13 | Testing of Apparatus - Future Experiments | Setting up |
| Imp Coll/Soton | π 7 | Investigation of Narrow Bosons produced in π^+p Collisions | Data |
| Oxford U/RHEL | X2/K14A | Polarization Effects in π^+p Elastic Scattering | Data |
| Westfield Coll/RHEL | X3/ π 8 | Measurement of Eta Decay Assymetry | Data |
| Bristol U | X3/K15 | K^+ p Differential Cross-Sections from 1.07 - 2.0 GeV/c | Data |

Internal Events

Mon, 7 Sept 11.30 am
Lecture Theatre

Nimrod Lecture
Series

Dr P J Duke
(RHEL)

Review of the Kiev Conference

Tues, 8 Sept 1.30 -
4.30 pm, Lab 1.30,
Bldg R1

Demonstration by Texas Instruments of their Model 720 Electronic Data Terminal, one of the Silent 700 Series. Further information may be obtained from H F Norris, R20, Ext 484.

Wed, 9 Sept 11 am
Conf Rm, R12

HEP Disc Grp

Dr J C Taylor
(Oxford)

Review of the Theoretical Contributions
at the Kiev Conference

Mon, 14 Sept 11.30 am
Lecture Theatre

Nimrod Lecture Series

Dr H Burkhardt
(U of Birmingham)

The Perils of Phase Shifting

Social News

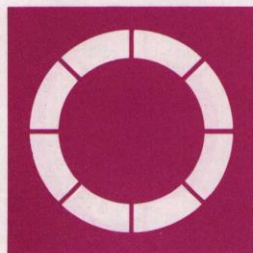
ANNUAL OPEN DARTS COMPETITION, 25 SEPT 1970 The Rutherford Darts League is holding an Open Darts Competition for teams of four on Friday, 25 Sept 1970, in the Coffee Lounge, R22, starting at 7.30 pm. Entrance fee is 10/- per team. The tournament will consist of singles, doubles and team games, and prizes will be awarded to the winner and runner-up in each section. A bar extension will be applied for! Details of teams should be sent to J Rice, Ext 275 or A Slater, Ext 252 as soon as possible but not later than 11 Sept.

CHRISTIAN FELLOWSHIP Friday, 11 Sept in the R12 Conf Room at 12.30 pm All welcome.

Rutherford Laboratory
4 9 70

H F NORRIS Ext 484
Scientific Administration Group
Building R20

No 32/70
14 Sept 70



Rutherford Laboratory Bulletin

General News

EMERGENCY STEAM SUPPLY A boiler unit is being rigged in the car park, east end of Building R1 to provide temporary steam supplies to various services in the Laboratory for 3 days commencing Friday 11 September 1970 whilst the steam supply from AERE is shut down due to the Main Boiler House chimney stack being repaired.

MISSING EQUIPMENT The following item of equipment has been reported missing from the electrical workshop in Hall 3:-
5/16" Wolf Sapphire Electric Drill, No 14/4498.

Anyone with information on the present whereabouts of this item is asked to contact Mr P Swan-Taylor Building R55 Ext 6363.

AERE MISSING EQUIPMENT Will anyone with information on the whereabouts of a Swift Mark I Metal Spray Gun, purchased by AERE in October 1964, which has probably been in use for a short time since 1964, at the Rutherford Laboratory, please contact M O M Roberts Building 152 AERE Ext 72 - 2145 as soon as possible.

WEA CLASSES AT WANTAGE

At Icknield School Springfield Road:-

Geology - Mondays commencing 21 September.

Adolescent Psychology - Tuesdays commencing 22 September.

Social Problems and Social Environment - Wednesdays commencing 23 September.

Looking at Paintings - Mondays commencing 19 October.

At St Mary's Convent ^{enich} Dorking Road:-

Modern Literature - Thursdays commencing 24 September.

All classes start at 7.30 pm. Further details from Mrs M Richold, Flat 3, Guild House, Ormond Road, Wantage. Tel: Wantage 3646.

FILM NOTICE It is Period 10. Colour Strip - LIGHT ORANGE for β and fast neutron packs. Please check that you are wearing the correct films and that all old ones are returned.

OVERSEAS VISITS Dr J T Hyman and Mr P Gottfeldt, to the USA 12 September - 5 October for discussions on computer based control systems at BNL, ANL, NAL, SLAC and the Los Alamos Scientific Laboratory. Mr L G Denton and Mr A Jones to CERN 13 - 16 September to discuss the testing and final build programmes of the β -p liquid hydrogen target. Dr R M Brown, Dr P J Litchfield and Mr C Solomondes, to Yugo-Slavia 13 - 27 September to attend the Herzeg Novi Summer School. Dr C M Fisher to CERN 14 - 16 September to attend meeting of the BEBC Study Group on Targets.

UNDELIVERABLE MAIL Letter addressed to Mr White enclosing a Service Manual on the DS50502 from International Electronics Ltd. This item can be claimed from H F Norris R20 Ext 484.

Machine Schedules

NIMROD CYCLE 11 (1.9.70 - 22.9.70)

Machine Physics: High Energy Physics (π^0 , X2/K12A, X2/K13, π^+ , X2/K14A, X3/ π^0 and X3/K15)

Full details of Cycle 11 were given in Bulletin No 31/70.

Internal Events

Mon, 14 Sept 11.30 am
Lecture Theatre

Nimrod Lecture
Series

Dr H Burkhardt
(U of Birmingham)

The Perils of Phase Shifting

Tues 15 Sept 11 am
Conf Room R12

Special HEP Disc
Grp

Prof T Kitagaki
(Pohoku Univ Japan)

A New Method of Kinematical Analysis
and $p - \eta$ Resonances

Wed 16 Sept 11 am
Conf Room R12

HEP Disc Grp

Dr A Seegar
(Oxford)

Analysis of $K^+ p \rightarrow \Lambda \pi^0$
Experiment at 700 - 800 MeV/c

Thurs 17 Sept 10.30 am
Conf Rm R12

Presentation on "Logic Design Automation" by the Computer Aided Design Bureau of Marconi-Elliott Computer Systems Ltd. This presentation of the automation of printed circuit board design is of particular interest to engineers and draughtsmen. Further information from H F Norris R20 Ext 484.

Mon 21 Sept 11.30 am
Lecture Theatre

Nimrod Lecture
Series

Prof D V Bugg
(QMC)

πp Scattering below 300 MeV

External Events

| | | | |
|--|----------------------------------|---|------------------------------------|
| Mon 14 Sept 2.30 pm Daresbury Laboratory | Lecture | D P Barber (Manchester) | K^0 Decays to 3π 's L |
| Tues 15 Sept 2.30 pm Daresbury Laboratory | Lecture | D Newton (Lancaster) M Ibbotson (Manchester) | Report on the Kief Conference |
| Tues 15 Sept 7.45 pm Univ of Reading | British Computer Soc. Meeting | Dr D Cope (DEC Ltd) | Cancer Treatment by Small Computer |
| Thurs 17 Sept 3.30 pm Conf Rm H8 AERE | Nucl Phys. Collog. | Mr R A Bell | (p,n) Reactions in Light Nuclei at |

Social News

RUTHERFORD AND ATLAS LABORATORIES ANNUAL CHESS TOURNAMENT The tournament is due to start on 5 October. Players wishing to enter must submit their names to either P Craske Ext 275 or W Glasgow Ext 321 by 25 September at the latest.

HARWELL DANCE A Harwell Dance is being held in the AERE Restaurant on Friday 23 October 1970 from 8.30 pm until 2 am. The bands for this conventional dance will be the Johnny Howard Band Show and Russ Henderson. The Rutherford and Atlas Laboratories have been allocated 50 tickets at 15/- each. Not more than four tickets may be sold to any member of the SRC staff for themselves, their families, and their personal guests. If the demand is greater than the tickets available a waiting list will be opened. Tickets may be purchased from the Cash Office Building R20.

Coaches will be run from Oxford, Abingdon, Didcot, Newbury and Wantage. Bookings may be made at the same time as dance tickets are bought. A charge of 3/- per head will be made to coach passengers.

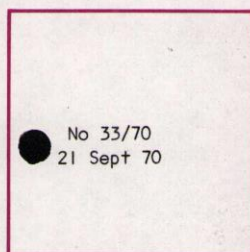
AERE HORTICULTURAL SOCIETY - 26 SHOW In the Marquees (opposite the AERE Shopping Centre) on 17 September 12.30 pm to 6 pm and 18 September 12 noon to 1.30 pm. Entry forms must be completed and returned to the Show Secretary Mrs B Payne Building 150 AERE not later than Monday 14 September. Schedules and entry forms etc from H F Norris Room 42 R20.

CHRISTIAN FELLOWSHIP Fri 18 September in the R12 Conference Room 12.30 pm. All welcome.

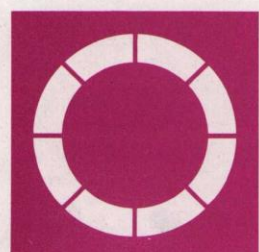
CSMA OXFORD GROUP Sunday 20 September. An afternoon Treasure Hunt. Contact committee for details or local rep. L.N Dutton R 25 Ext 224.

Rutherford Laboratory
11 9 70

H F NORRIS Ext 484
Scientific Administration Group
Building R20



No 33/70
21 Sept 70



Rutherford Laboratory Bulletin

General News

LIBRARY NOTICE The Library is considering discontinuing subscriptions to the following journals:-

Architects Journal
Comptes Rendus
Product Finishing

Anyone who would be seriously inconvenienced by the lack of these journals is asked to telephone the Librarian, Ext 6668.

FILM NOTICE It is Period 10. Colour Strip - LIGHT ORANGE for $\beta\gamma$ and fast neutron packs.

Please check that you are wearing the correct films and that all old ones are returned.

BULLETIN NOTICE Items for inclusion in the next issue of the Bulletin should be sent to Room 42, R20 to arrive not later than mid-day on Wednesday, 23 September. Dead-line for late items is 5 p.m. same day. During the current week telephone enquiries should be directed to Mr F Harden, R20, Ext 6114/6287.

OVERSEAS VISITS Mr J A Fox departed 16 Sept for a six weeks attachment to CERN.

Mr K A Freeston and Mr N D Gomersall, to CERN, 20-23 September, to install electronics caravan for p-p experiment.

Dr G R Stevenson to CERN, 21-23 September, to attend meeting on 300 GeV Radiation Problems also for discussions on proposals for joint experiments.

Mr M R Harold, to CERN, 21-25 September, to attend meeting of the 300 GeV Ejection Study Group.

The Director, to Geneva, 23-25 September, to attend meetings of the Nuclear Physics Research Committee and the European Physical Society Conference Committee.

Mr P Wilde, to Frankfurt, 23-25 September, to attend meeting of the Esone Camac Working Party.

Machine Schedules

NIMROD Cycle 12 (22 9 70 - 13 10 70)

Machine Physics
High Energy Physics

| Team | Beam | Experiment | |
|----------------------|-------------|---|------------|
| Surrey/B'ham/RHEL | π^0 | Total Reaction Cross-Sections for Pions on Nuclei | Setting up |
| B'ham/RHEL | X2/K12A | K^+-n Elastic Scattering between 450 and 950 MeV/c | Setting up |
| Camb U./RHEL | X2/K13 | Testing of Apparatus - Future Experiments | Setting up |
| Imp. Coll. | X1/K9 | π^+p Differential Cross-Sections from 0.8 - 1.3 GeV/c | Data |
| Oxford U./RHEL | X2/K14A | Polarization Effects in π^+p Elastic Scattering | Data |
| Westfield Coll./RHEL | X3/ π^8 | Measurement of Eta Decay Asymmetry | Data |
| Bristol U./RHEL | X3/K15 | K^+p Differential Cross-Sections from 1.07 - 2.0 GeV/c | Data |

Internal Events

| | | | |
|--|--------------------------|---|---|
| Mon, 21 Sept 11.30 am Lecture Theatre | Nimrod Lecture Series | Prof. D V Bugg (QMC) | πp Scattering Below 300 MeV |
| Thurs, 24 Sept 12.40 pm Lecture Theatre | Film | "Laser Light" - A Scientific American Production | |
| Mon, 28 Sept 11.30 am Lecture Theatre | Nimrod Lecture Series | Prof. J Steinberger (CERN) | K^0 Detector Using Multiwire Proportional Chambers |

External Events

| | | | |
|--|-----------------------------|---|-----------------------------------|
| Tues. 22 Sept 7.30 pm Oxford Coll. of Tech. | BCS Oxford Group Meeting | D P Harris (Data Processing Manager, Tesco Ltd) | The Tesco VDU Real Time System |
|--|-----------------------------|---|-----------------------------------|

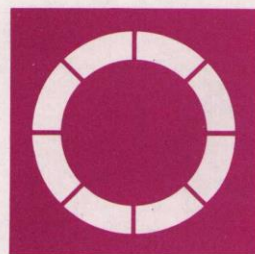
Social News

CHRISTIAN FELLOWSHIP Friday, 25 September. The Vicar of Harwell, the Rev E Atkins, will be visiting the Fellowship for an informal lunchtime meeting in the Conf. Room R12 at 12.30 pm. All Welcome.

Rutherford Laboratory
19 7 70

H F NORRIS Ext 484
Scientific Administration Group
Building R20

No 34/70
28 Sept 70



Rutherford Laboratory Bulletin

General News

UNDELIVERABLE MAIL A letter and catalogue has been received from Eletta, Sweden in answer to a letter dated 24 August from someone at the Laboratory. The subject is liquid flow monitors and in particular, orifice plates for instruments already in use at the Laboratory. The letter and catalogue may be collected from Mr F Harden, Building R20.

Letters for Mr O F Adams and Emeric John Simbo are also awaiting collection from Mr F Harden, Building R20.

VISIT Professor Sir Brian Flowers FRS, Chairman of the Science Research Council will visit the Rutherford Laboratory on Wednesday, 30 September 1970. Details of the visit will be promulgated shortly.

MISSING EQUIPMENT A small hand Dymo machine, type M5, is missing from the Computer Room R1. Will anyone with any information of its whereabouts please contact Miss M Anderson, G92, R1 Ext 270.

FILM NOTICE It is period 10. Colour Strip - LIGHT ORANGE for 8y films and fast neutron packs. Please check that you are wearing the correct films and that all old ones are returned. Next film change Tuesday, 6 October 1970.

RUTHERFORD LABORATORY LECTURES The next lecture in this series will be given at 3.15 pm on Thursday, 1 October 1970, in the Rutherford Laboratory Lecture Theatre by Sir Harrie Massey FRS. The title of his lecture will be 'THE PRESENT POSITION IN SPACE SCIENCE'.

ITEMS FOR DISPOSAL It is intended to dispose of the items listed below. Anyone interested in obtaining these items should contact R G Fowler, R25, Ext 388.

- 1 off Capacitor 30 kV 0.25 uf
- 3 off Capacitors 30 kV 0.5 uf, Dubilier
- 1 off Slee spot welder
- 1 off Pentak Power Supply unit 150 kV 10 mA +ve output
- 1 off Power Supply unit 250 kV 0.5 mA -ve output
- 4 off Lead shielding panels 8' x 4' x $\frac{1}{2}$ "

SCHOLARSHIPS At the Royal Military College of Science, Shrivenham. The Ministry of Defence can make available to male Civil Servants (including SRC staff) a number of scholarships at the RMCS, Shrivenham for scholars to study for degrees in Applied Science and Engineering. Further information can be obtained from the Training Section, R20, Ext 555. The closing date for applications is 19 October 1970.

OVERSEAS VISITS Dr T C Bacon, to CERN, 27-29 September, for discussions on beam lines. Dr R J N Phillips, to CERN, 27 September - 9 October, for discussions with Theory Division. Mr H Wroe and Mr P J Barker to ESTEC, 29-30 September. Mr D A Gray, to CERN, 30 September - 2 October, for discussions on the 300 GeV project and to attend meetings of the 300 GeV Machine Committee.

Machine Schedules

NIMROD Cycle 12 (22 9 70 - 13 10 70)

Machine Physics: High Energy Physics (π 10, X2/K12A, X2/K13, X1/K9, X2/K14A, X3/ π 8 and X3/K15). Full details of Cycle 12 were given in Bulletin No 33/70.

Internal Events

| | | | |
|--|-----------------------|------------------------------|--|
| Mon, 28 Sept 2 pm Lecture Theatre (Please note change of time) | Nimrod Lecture Series | Prof J Steinberger (CERN) | K^0 Detector Using Multiwire Proportional Chambers |
| Wed, 30 Sept, 11 am Conf Rm, Bldg R1 | HEP Disc Grp | J Sleeman (RHEL) | $A \pi^+ p$ Elastic Polarisation Measurement between 0.6 - 2.7 GeV/c |
| Thurs, 1 Oct, 3.15 pm Lecture Theatre | RHEL Lecture Series | Sir Harrie Massey FRS | The Present Position In Space Science |
| Friday, 2 Oct, 1.15 pm Lecture Theatre | Film | | 'Laser Light' - A Scientific American Production |

External Events

| | | |
|--|---|--|
| Mon, 28 Sept, 11.15 am Clarendon Laboratory Oxford | Dr I Bialynicki-Birula (Warsaw & Pittsburgh) | Magnetic Monopoles and the Madelung Fluid |
| Tues, 29 Sept Daresbury Laboratory | B Gabathuler (Daresbury) | Present and Future Physics with Electron Storage Rings |

General News

Social News

CSMA OXFORD GROUP, Monday, 28 September, a skittle match at Risely. A challenge from the Reading and Farnborough Groups. Start not later than 8 pm. Details from local rep: L N Dutton, R25, Ext 224.

CHRISTIAN FELLOWSHIP Friday, 2 October. Prayer Meeting in the PLA Conf Room R12 at 12.30 pm. All welcome.

Rutherford Laboratory
24 9 70

F HARDEN Ext 6114
Scientific Administration
Group R20

Machine Schedules

Internal Events

External Events