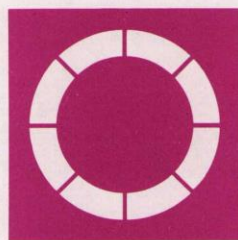


No. 12/67
3 Apr 67



Rutherford Laboratory

Bulletin

General News

VISITORS. A party of Science & Mathematics Lecturers will visit the Laboratory on Tuesday, 4 April.

RADIATION PROTECTION NOTICE. Period 4 commenced 20 March. Colour Strip - RED for β and fast neutron films. Please check that you are wearing the current films and return all old films promptly.

OBITUARY NOTICE. We deeply regret to announce the death of Mr. H. Johnson, Tech. 1, Nimrod Power Supplies on Saturday 25 March. Harry Johnson who was aged 41, had been at the Laboratory for the past four year. Our deepest sympathy is extended to his widow and family.

EXTERNAL COURSE. The Borough Polytechnic, London S.E.1 have announced a two week course on "The Design, Use and Maintenance of Electronic Equipment used in Nuclear Physics", from Monday 26 June to Friday 7 July. An additional, optional preliminary course of one week from Monday, 19 June to Friday 23 June is also offered. Further details may be obtained from Mr. E.J.D. Newbold, Personnel Branch, Bldg R.20, Ext 585.

MISSING EQUIPMENT. Will the person who borrowed a Black and Decker Orbital Sander, Ser/No. 14/0048 from the PLA Mechanical Workshop kindly return same.

Machine Schedules

NIMROD Cycle 2 (21.3.67. - 17.4.67.)

Machine Physics; High Energy Physics ($K1, \pi 4, \pi 5$ and $\pi 6$)

Full details of Cycle 2 were given in Bulletin 11/67.

P.L.A.

Date	Team	Experiment
2-3 Apr		Maintenance
4 Apr	Accelerator Physics	Injector Measurements
5-8 Apr	Birmingham Univ.	Cross Section Measurements
9-12 Apr	RHEL and QMC 1	Elastic Scattering of Protons on He^4

Internal Events

Mon, 3 Apr. 11.15 a.m.
Lecture Theatre

Nimrod Lecture
Series

Prof. F. Farley
(R.M.C.S. Shrivenham
& C.E.R.N.)

New Results on the Muon Anomalous
Precession

External Events

Mon, 3 Apr, 7.30 p.m.
Great Western Hotel Reading

A.S.E.E. Branch
Meeting

J.A. Brine
(Stewarts & Lloyds Ltd)

Men, Work and Human Relationships
with Special Reference to Automation

EVENTS AT A.E.R.E.

Wed, 5 Apr, 2 p.m.
Conf. Rm, Bldg 8.9.

Theor. Phys.
Div. Seminar

Dr. P. Dean
(N.P.L.)

Atomic Vibrations in glasses

Thurs, 6 Apr. 2 p.m.
Conf. Rm. Bldg 8.9.

Joint Applied
Maths Grp Seminar

Prof. C. Storey
(Loughborough)

The Direct Method of Liapunov for
Stability of Differential Equations

Social News

CHRISTIAN FELLOWSHIP. 12.30 p.m. Thurs, 6 April in the PLA Conf. Rm, R.12 - Meeting for Fellowship and Prayer.

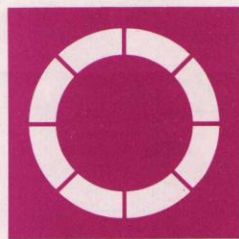
RECORD SOCIETY. 12.30 p.m. Tuesday, 4 April, Lecture Theatre.

The programme for Tuesday is not available at the time of going to press but will be shown on notice boards shortly.

Rutherford Laboratory
31.3.67.

H.F. Norris Ext 484
Sci. Admin Grp
R.20

No. 13/67
10 Apr 67



Rutherford Laboratory

Bulletin

General News

CYBERNETICS COURSE (COMMUNICATION AND CONTROL). The W.E.A. - Wantage Branch has arranged a short course of six meetings on Communication and Control. The course will be held at Icknield School, Springfield Rd, Wantage, on Wednesdays, from 7.30 to 9.00 p.m., beginning on 19 April. The tutor will be Dr. Michael Stone, University of Oxford Institute of Experimental Psychology, and the syllabus will include: Control Theory, Information Theory, The Human Operator and Artificial Intelligence. Further details may be obtained from Mr. G. Sandels, R.25 Ext 6122/6133.

MISSING EQUIPMENT. A Roband constant current power supply, type 1092 has been borrowed from Bldg R.25 probably by an experimental team who may have inadvertently removed it with their own equipment. Would the person who borrowed this item please contact Mr. E.G. Welch, Bldg R.2, Ext 445/6322.

OVERSEAS VISITS. Mr. M. Snowden, Dr. D.B. Thomas, Dr. R. Newport, Dr. P.R. Williams, Dr. C.M. Fisher and Mr. R. Walker, to Heidelberg, Germany, 12-15 April, to attend an International Colloquium on Bubble Chambers. Dr. Fisher will present a paper.

Mr. J.A. Fox, to CERN, 16 April for approx. 10 days, to initiate computer studies of static power supply applications to CERN.

TRADE CATALOGUE LIBRARY. The trade catalogue library of the Central Engineering Group has now been reorganised with a full-time librarian in charge and its services are available to all members of the Laboratory.

Its aim is to provide useful up-to-date information from trade publications. There are many current catalogues in stock, and special liaison arrangements have been made with AERE. It is intended to be primarily a reference library. The collection of catalogues will be periodically checked to ensure that it is current.

The Librarian is Mr. S.A. Gutheridge, Rm 2-64 R.1, Ext 6325, who will assist in locating or obtaining catalogues. He will be pleased to hear from holders of small collections of catalogues who would like to transfer them to the library.

RADIATION PROTECTION NOTICE. Period 4 commenced 20 March. Colour Strip - RED for $\beta\gamma$ and fast neutron films. Please check that you are wearing the current film and that old films have been returned.

Machine Schedules

NIMROD Cycle 2 (21.3.67. - 17.4.67.)

Machine Physics; High Energy Physics (K_1 , π^+ 4, π^+ 5 and π^+ 6)

Full details of Cycle 2 were given in Bulletin 11/67

P.L.A.

Date	Team	Experiment
10-12 Apr	RHEL & QMC 1	Elastic Scattering of Protons on He ⁴
13-16 Apr		Maintenance

Internal Events

Mon, 10 Apr 11.15 a.m. Lecture Theatre	Nimrod Lecture Series	Dr. N. Dombey (Univ. of Sussex)	Photo-production in the Region of the Second π -N Resonance
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Please note that there is no lecture in the Nimrod Series on Monday 17 April

External Events

EVENT AT A.E.R.E.

Fri, 14 Apr, 2 p.m. Conf. Rm Bldg 8.9.	Theor. Physics. Div. Seminar	Prof. M. Fixman (Yale Univ.)	Time Dependent Correlation Functions in The Critical Region.
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Social News

RECREATIONAL SOCIETY - ARCHERY CLUB. It is proposed to form an Archery club at the Laboratory and in order to give people a chance to try this sport without committing themselves, practice schools will be held in front of the restaurant on Fridays 7 and 14 April, commencing at 4.15 p.m.

If you like the idea of trying your skill with a bow and arrow, please contact D.A. Cragg, R.1 Ext 309 or failing that, just turn up at the appropriate time.

RECORD SOCIETY 12.30 p.m. Tuesday 11 April, Lecture Theatre.

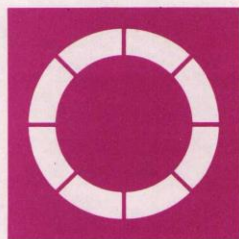
"My Fair Lady", a selection of songs from this famous musical show, with members of the original stage production, including Julie Andrews.

CHRISTIAN FELLOWSHIP. 12.30 p.m. Thurs 13 April, in the P.L.A. Conf. Rm, R.12 Bible Study, John's Gospel Ch. 17: 1-8 led by J.L. Thomas. All are welcome.

Rutherford Laboratory
7.4.67

H.F. Norris Ext 484
Scientific Admin Group
Building R.20

No. 14/67
17 Apr 67



Rutherford Laboratory Bulletin

We regret to announce the death of Dr. G. Weeks, University of Oxford, on Sunday, 9th April in a glider accident. Dr. Weeks had for the past seven years been closely associated with the Rutherford Laboratory particularly in connection with the design and construction of the Helium Bubble Chamber.

General News

THE PHYSICS EXHIBITION 1967. The exhibition will again be held in The Great Hall, Alexandra Palace, Wood Green, London, N.22. The Science Research Council's stand (No. 76) is being shared by the Radio and Space Research Station, the Royal Greenwich Observatory and the Rutherford Laboratory. High speed data processing equipment for elementary particle physics is being shown by the Laboratory. The exhibition will be open from Monday 17 April to Thursday 20 April inclusive although the first morning is for members only. A limited number of tickets are available from H.F. Norris, Bldg R.20 Ext 484.

UNCLAIMED MAIL A letter addressed to Dr. A.J. Smith has been received from Thomas Cook & Son Ltd., relating to travel arrangements for a Conference on the Physics of Electronic and Atomic Collisions, in Leningrad on 17-23 July. Would the owner please contact Scientific Administration, Bldg R.20 Ext 484/6297.

RADIATION PROTECTION NOTICE. Period 5 commences Monday, 17 April.

Colour Strip - BLUE for β and fast neutron films.

- Please
- (1) change films promptly and return all old films
 - (2) make sure films are exposed, check that all the fillers are intact
If a new holder is required, contact Miss J. Towers, R.20 Ext 430.
 - (3) ensure that film is placed in the holder.

Machine Schedules

P.L.A.

Date	Team	Experiment
17-18 Apr	RHEL & QMC 1	Elastic scattering of Protons on He^4
19-21 Apr	QMC & Queens Univ Belfast	(p,d) Scattering
22-23 Apr	RHEL & QMC 2	(p,n) Reactions by Time of Flight Method.

NIMROD Cycle 3 (11.4.67. - 2.5.67.)

1. Machine Physics - X1 commissioning tests
2. High Energy Physics

Team	Beam	Experiment	
Oxford U./Saclay	K1	π^- p interactions in the Saclay Bubble Chamber	Data
AERE/QMC/RHEL	π^+ 4	A study of Σ^0 decay	Setting up
Bristol	π^- 5	π^- p differential cross-section measurements	Setting up
Westfield Coll/RHEL	π^- 6	Measurement of the Σ^+ decay parameters	Setting up
AERE/QMC/RHEL	K7	Σ^- polarization measurements	Setting up

Internal Events

Fri, 21 Apr. 11.15 a.m. Special Lecture Dr. M. Derrick Recent Results of Bubble Chamber work at the ZGS.
Lecture Theatre (Argonne National Lab).

External Events

EVENT AT AERE

Tues, 18 Apr. 2 p.m. Theor. Phys. Dr. R.C. Johnson The Deuteron-nucleus Optical Potential.
Conf. Rm. Bldg 8.9. Div. Seminar

EVENT AT THE ATLAS LAB.

Thurs, 20 Apr. 2 p.m. Joint Applied Maths Mr. B.E. Cooper ASCOP - A Statistical Computing Procedure
Conf. Rm. Group Seminar

Social News

CHRISTIAN FELLOWSHIP. 12.30 p.m. Thurs. 20 April, in the P.L.A. Conf. Rm. R.12. Bible Study, John's Gospel Ch. 17 : 9-19, led by Dr. L.J. Herbst. All are welcome.

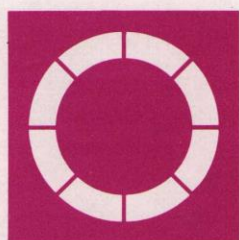
RECORD SOCIETY. 12.30 p.m. Tuesday, 18 April, Lecture Theatre.

"Address to the Oxford Union" by Gerrard Hoffnung, and other items.

Rutherford Laboratory
14.4.67.

H.F. Norris Ext 484
Scientific Admin Group
Building R.20

No. 15/67
24 Apr 67



Rutherford Laboratory Bulletin

General News

VISITORS. A small party of members of the South Berks College of Further Education will visit the Laboratory on Thursday, 27 April.

SYMPOSIUM A one day symposium on "Cryogenics - Low Temperature Engineering", will be held at the Enfield College of Technology, London, on Wednesday, 17 May commencing at 10 a.m. The fee for this symposium is £5 5s Od. Further information from H.F. Norris, R.20 Ext 484.

RADIATION PROTECTION GROUP NOTICE. Period 5 commenced Monday, 17 April. Colour Strip - BLUE for $\beta\gamma$ and fast neutron films. Please check that you are wearing the current film badge.

Please ensure that:- (1) films are worn in the holder correctly with both the number and colour strip showing in the open window. This side of the badge to be worn facing forwards.
(2) all the metal filters in the holders are intact.

If a new holder is required please contact Miss J. Towers, R.20, Ext 430

RESIDENTIAL CONFERENCE The Institute of Mathematics and its Applications are holding a residential conference on "The Mathematics of Solid State Physics" at the University of Essex, Colchester, from 23-26 July 1967. Further information from H.F. Norris, R.20 Ext 484.

SYMPOSIUM. A symposium on "Microcircuits and their Applications" will be held at the "Northern Polytechnic, Holloway Rd, London N.7 from 31 May to 2 June. The conference registration fee is £12 12s Od. Further information from H.F. Norris, R.20 Ext 484.

FOUND A sum of money was found in the entrance to the men's toilet on the ground floor of Bldg R.1 on Wednesday 12 April. It may be claimed from Mr. A. Taylor, Personnel Group, R.20.

OVERSEAS VISITS Dr. P.J. Duke, to the USA 22 April for approx 18 days, to present a paper on K7 experiments at the meeting of the American Physical Society. He will also visit various laboratories.

Dr. G. Manning, to the USA 23 April for 3 weeks, to attend the meeting of the American Physical Society and to visit various laboratories.

LIBRARY NOTICE Would anyone knowing the whereabouts of any copy of "Pulse digital and switching waveforms" by Millman and Taub, please contact the library, Ext 384, as all three copies are missing, and the library is unable to satisfy requests for this book.

Machine Schedules

NIMROD Cycle 3 (11.4.67. - 2.5.67.)

Machine Physics - X1 commissioning tests; High Energy Physics (K1, π 4, π 5, π 6, and K7)

Full details of Cycle 3 were given in Bulletin 14/67.

P.L.A.

Date	Team	Experiment
24-27 Apr		Maintenance
28 Apr		Accelerator Physics
29 Apr-4 May	Manchester U.	Elastic Scattering of Protons on a range of Elements.

Internal Events

Mon, 24 Apr 11.15 a.m. Lecture Theatre	Nimrod Lecture Series	Dr. D.R.O. Morrison (C.E.R.N.)	(a) Organisation and Work of a Bubble Chamber Group (b) Quantum Numbers of the A-Mesons.
Wed, 26 Apr 2 p.m. Conf. Rm. Bldg R.12.	P.L.A. Div Seminar	Dr. B. Bonner (RHEL)	Elastic Scattering of Fast Neutrons by Deuterons (Work done at Rice University)
Wed, 26 Apr 7.30 p.m. Lecture Theatre	I.E.R.E. Branch Meeting	Mr. P. Wilde (RHEL)	Instrumentation for High Energy Physics Experiments (Non-members welcomed)
Fri, 28 Apr, 2 p.m. Lecture Theatre	Special Lecture	Dr. A. Trefil (CERN)	The Quark Model for Inelastic Scattering
Mon, 1 May, 11.15 a.m. Lecture Theatre	Nimrod Lecture Series	Dr. G. Giaconelli (Bologna)	New Structures in K^+ -Nucleon and \bar{p} -Nucleon Total Cross-sections

EXHIBITIONS. A display of electronic instruments by Airmec Ltd., will be held, from 10 a.m. to 4 p.m. in the Conference Room, Bldg R.1 on Tuesday, 25 April.

Mobile Demonstration. A demonstration van from Brush Electric Engineering Co. Ltd., will display various types of Thyristor Controlled Variable Speed Motor Drives, on Friday, 28 April, 9.30 a.m. - 12 noon approx at the front of Bldg R.25. (Further details of both the above are available from B.E. Kingdon, Bldg R.20 Ext 6297)

External Events

Mon, 24 Apr 4.45 p.m. Royal Fort Bristol Univ.	Physics & Geophysics Colloq.	Dr. J.D. Hunt (Oxford Univ.)	Solidification
Thurs, 27 Apr, 2.30 p.m. Clarendon Lab, Oxford	Low Temp & Solid State Phys. Seminar	Prof. W. Paul (Harvard U.)	The Properties of Hydrogenic Donors in Semiconductors with Several Non-equivalent Conduction Band Extrema.
Thurs, 27 Apr. 4.15 p.m. Univ. of Birmingham.	Maths Phys. Seminar	Dr. J.E. Bowcock (Birmingham)	Analytic Continuation of Form Factors.
Thurs, 27 Apr, 6 p.m. City of London School, London	Inst. of Maths Meeting	Dr. J.M. Hammersley (Oxford)	The Enfeeblement of Mathematical Skills by "Modern Mathematics" and by similar Soft Intellectual Trash in Schools and Universities.
Fri, 28 Apr, 4.15 p.m. Clarendon Lab, Oxford.	Colloq.	Mr. O.G. Symko (Oxford)	Nuclear Cooling and Nuclear Refrigeration
Fri, 28 Apr, 2.30 p.m. Dept of Eng. Sc. Parks Rd, Oxford.	Lecture	Prof. George Forsythe (Stanford Univ.)	Computer Science Research & Education at Stanford University.

EVENTS AT THE ATLAS LAB.

Mon. 24 Apr, 2.30 p.m.
Conf. Rm.

Dr. J.S. Collins (Dept. of Machine Intelligence and Perception, Univ. of Edinburgh) will demonstrate "A Multi Access System to the Department's Elliott 4120 Computer".

Thurs. 27 Apr, 11 a.m.
Conf. Rm.

Lecture

Prof. George Forsythe
(Stanford Univ.)

"On the Asymptotic Directions of the S-Dimensional Optimum Gradient Method."

EVENTS AT A.E.R.E.

Tues. 25 Apr, 2 p.m.
Conf. Rm. Bldg 8.9.

Theor. Phys Div.
Seminar

Dr. V. Heine
(Cambridge)

Electronic Structure of Transition Metals

Thurs. 27 Apr, 2 p.m.
Conf. Rm. Bldg 8.9.

Joint Applied Maths
Group Seminar

Mr. A.E. Glennie
(A.W.R.E.)

The S4 Compiler

Social News

RUTHERFORD AND ATLAS LABORATORY RECREATIONAL SOCIETY A meeting of the Darts Club will be held in the Conference Room, Bldg R.1. on Tuesday, 2 May at 12.30 p.m. sharp.

Agenda Select new committee and arrange the Annual Darts Competition for 1967. All interested persons are asked to make an effort to attend.

(Editors Note: the full title of the Society is as shown above. Some confusion has been apparent when a shortened version has been used, i.e. -"Recreational Society". The equivalent at AERE is the Recreational Association and details of their various club activities are given in their own weekly AERE News).

CHRISTIAN FELLOWSHIP. 12.30 p.m. Thurs. 27 April, in the PLA Conf. Rm. R.12. Talk by Pastor S. Garnham of the Abbey Strict Baptist Chapel, Abingdon, on "Jesus Christ - The certainty of His Re-appearing".

RECORD SOCIETY 12.30 p.m. Tuesday 25 April, Lecture Theatre.

Famous Organ Works by J.S. Bach, including the popular Toccata & Fugue in D Minor and "The Great" Fantasia & Fugue in G Minor. Recorded by Albert Schweitzer on the organ of All Hallows Church Barking-by-the-Tower, London, 16-18 December 1935. The organ, built by Harrison in 1909, was described by Schweitzer as "most beautiful" and "an ideal Bach organ". It was destroyed along with most of the church during the Second World War.

Rutherford Laboratory
21.4.67.

H.F. Norris Ext 484
Scientific Admin Group
Building R.20