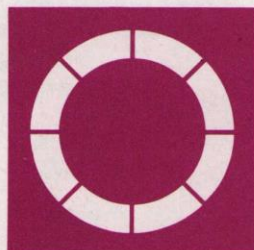


No 17/70
4 May 70



Rutherford Laboratory Bulletin

General News

VISITORS Thirty pupils and members of staff from the Finchley Grammar School will visit the Laboratory on Saturday, 9 May.

APPOINTMENT. Mr P Bowles, the Chief Engineer of the Rutherford Laboratory has accepted an invitation from the Vice-Chancellor of Reading University to serve on their Appointments Committee.

MISSING EQUIPMENT. The following item of equipment has been reported missing from Lab 6:-

Metrix Multimeter - Type 462

Will anyone with information on the present whereabouts of this item please contact Mr J L Thomas, Lab 6, R1, Ext 389.

FOUND. A ladies scarf was found recently at the Laboratory. Will the owner please contact Mrs T Walker, Admin Office, R20.

FILM NOTICE. It is Period 5. Colour Strip - YELLOW for 8y and fast neutron packs. Please check that you are wearing the correct dosimeter. Next film change - 18 May.

OVERSEAS VISITS. Mr P Seager, to Germany, 3-4 May, to inspect and collect targets from Balzers Geisenheim.

Mr P J Barker, Mr H Wroe and Mr E Higgins to Holland, 3-5 May, to attend TDI Meeting.

Mr V Thorp, to Liege, 4-5 May, to attend Belgium/UK Interface Meeting.

Dr L C W Hobbs, to Holland and Switzerland, 4-8 May, to visit ESTEC in connection with space project and to CERN to attend 300 GeV Study Group Meeting and Meeting of Machine Committee.

Mr J A Fox, to CERN 4-9 May, to attend 300 GeV Study Group Meeting and Meeting of Machine Committee.

Dr G Manning, to CERN, 5-6 May, to attend N.P.R.C. Meeting.

The Director, to CERN, 8-9 May, to attend ECFA Meeting.

Machine Schedules

NIMROD Cycle 5 (28.4.70-19.5.70)

Machine Physics: High Energy Physics (X1/K9, X3/π8, X3/K15 and π7)

Full details of Cycle 5 were given in Bulletin No. 16/70.

Internal Events

Mon, 4 May, 11.30 am., Lecture Theatre	Nimrod Lecture Series	Dr K Winter (CERN)	Experiments to Test the Validity of the $\Delta S/\Delta Q$ Rule
Wed, 6 May, 11.0 am, Conf. Rm., R1	HEP Disc Grp.	Theorists Suggest Experiments.	(Another meeting in the series where theorists suggest areas of high energy physics where future experiments may be of value).
Wed, 6 May, 12.40 pm Thurs, 7 May, 1.15 pm Lecture Theatre	Film Show	"Not Enough" a 30 mins. colour film from OXFAM	

We are grateful to Martin Wilson for his efforts in obtaining this film. Since 23 February 1965 a large number of films have been shown at the Laboratory, covering a very wide range of subjects. However as far as the Editor can remember this is the first time an Oxfam film or a film of a similar nature has been shown. "Not Enough" which was filmed in Asia, Europe and America deals with the problems of under development, and what both the rich and poor countries are doing about it.

The repeat showing of the Nimrod film will continue next week with the showing of Part 2.

Mon, 11 May, 11.30 am, Lecture Theatre	Nimrod Lecture Series	Dr A Werbroek (Turin)	Analysis of Multi-Body Meson Resonance Decays.
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External Events

EXTERNAL COURSES. A provisional programme of two courses of lectures to be given at 21 Banbury Road Oxford was published in Bulletin No 16/70. Please note that the dates for Dr Benson's lectures have now been amended to read - weeks beginning 25 May, 1 June and 8 June, Monday and Tuesday 10.15 am to 11.15 am.

Mon, 4 May, 4.15 pm Queen Mary Coll.	Theor. Phys. Seminar	Dr Hong Mo Chan (Geneva)	The Generalised Veneziano Model
Mon, 4 May, 10.0 am Univ. of Bristol	Phys and Geo-Phys Colloq.	Dr H Röthlisberger (ETH, Zürich)	The Physics of Water Circulation in Channels within Glaciers
Tues, 5 May, 2.30 pm, 21 Banbury Rd, Oxford	Nucl. phys. Seminar	Dr I S Tower (Oxford)	Hindrance in Beta-Decay in Mass Range $A = 37$ to $A = 43$
Tues, 5 May, 2.30 pm Univ. of Manchester	Theor. Phys Seminar	Prof. E C Zeeman (Warwick)	Elementary Catastrophes
Thurs, 7 May, 4.15 pm Clarendon Lab, Oxford	Theor. Phys Seminar	M G Burt	The Momentum of a Light Wave in a Refractive Medium
Thurs, 7 May, 8.30 pm, 21 Banbury Rd, Oxford	Seminar in Elementary Particle Physics	Prof M Perl (SLAC and Westfield Coll.)	Large Momentum Transfer Two-Body Processes and Neutron-Proton Elastic Scattering in Particular

Social News

AERE HORTICULTURAL SOCIETY. An evening it appears, that all gardeners have been eagerly awaiting, as on Tuesday, 5 May Mr J Burras, the Superintendent of the Oxford Botanic Garden will give a lecture with slides entitled "Colour in the Garden Throughout the Year". Time - 7.15 pm for 7.30 pm. Place - Rutherford Laboratory Lecture Theatre. After an interval for refreshments the evening will continue with "Leisure Pleasure", a lighthearted tour with a camera, by David Gully. Tickets for this Gardeners Evening can be obtained free of charge (for you and your friends) from the Secretary Mrs O Collett, Building 521 or H F Norris, R20, Ext 484.

RECORD SOCIETY. Tues, 5 May, 12.30 pm, Lecture Theatre.

Violin Concerto by Samuel Barber. Robert Gerle, violin with the Vienna State Opera Orchestra conducted by Robert Zeller.

Samuel Barber, a modern American composer, is probably best known for his 'Adagio for Strings'. The violin concerto is written in a similar romantic vein. For those people not familiar with this work it should perhaps be emphasized that although it is the product of a modern composer it is very melodic in its structure and not atonal. Put more simply - it is a very romantic and tuneful piece of music.

CHESS CLUB SUCCESSFUL AGAIN. On Monday 13 April the Laboratory Chess Club defeated Wantage by seven games to three. In the return match on Monday 27 April, Wantage did not get their revenge as the Lab team won again by five games to four. With two games to go Wantage were leading 4-3 but both Noel Stewart and Colin Uden had fine wins and this settled the issue. Other winners for the Lab were Bill Glasgow, Mick James and John Mogford.

CHRISTIAN FELLOWSHIP. Friday, 8 May in the R12 Conference Room at 12.30 pm. All welcome.

Rutherford Laboratory
1.5.70

H F Norris Ext 484
Scientific Admin Group
Building R 20

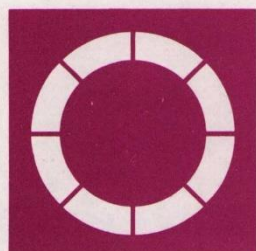
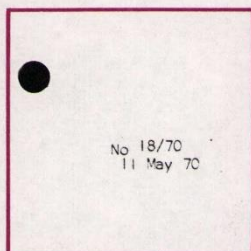
STOP PRESS

Fri 8 May, 2.15 pm,
Univ. of Southampton

Particle Physics
Seminars

E J Leader
Westfield College

A Review of Daughters and Conspirators in
Regge Poles



Rutherford Laboratory Bulletin

General News

RESTAURANT PRICES - RLC 11/70 announces a general increase in Restaurant prices from Monday 11th May, the first since December 1968. The practice of recovering S E T by 3d surcharge is to cease. An equivalent sum will be added to the cost of labour and has been taken into account in fixing the new prices. Both staff and visitors may appreciate some explanation of the financial basis on which the Restaurant operates and the factors which have made the price increase inevitable.

Broadly the cost of food and labour for mid-day meals must be recovered from the prices charged. The prices do not include any element for the cost of buildings and equipment, fuel, or the caterer's management fee as distinct from the manager's salary. The Restaurant Committee have examined the number of staff employed in the Restaurant and have concluded that it compares reasonably with other staff restaurants. Further the prices paid to suppliers have been found to be in line with those paid by other large users. It would help out of all proportion if more people used the Restaurant as the labour costs would be spread over more meals; the number of meals served has fallen since the earlier years. The Restaurant Committee have concluded that the scope for economy is very limited and in the face of rising costs there is no alternative to increased prices.

The Restaurant Committee hope that both staff and visitors will recognise that the Restaurant still offers very good value for money and will continue to make good use of this amenity.

FOUND - An electric razor in a leather case has been found in the blue car park. Would the owner please contact Mr R Hecken, Admin. Office, R2, Ext 6615.

RUTHERFORD LABORATORY LECTURE - The next lecture in this series will be given by Dr E F Schumacher, Economic Advisor to the Coal Board. He is also one of the Directors of a company called the "Intermediate Technology Development Group", founded with the aim of identifying and developing simple technologies which can be effectively applied to the problems encountered in the developing countries. Dr Schumacher will be talking about the importance of this work in his lecture, which he has entitled, "Intermediate Technology - the Missing Factor in Overseas Aid". See Internal Events for time etc.

BURSARY AND SANDWICH COURSE AWARDS FOR 1970 - A limited number of awards are available to members of staff who wish to undertake full-time or Sandwich courses at Universities. Details may be obtained from the Training Section, and anyone who would like to be considered for such an award should contact Mrs R A Jeans, R20, Ext 555.

VISITORS - Thirty students and members of staff from the Magdalen College Science Club will visit the Laboratory on Saturday 16 May.

MISSING EQUIPMENT - The following item of equipment has been reported missing:-

Avometer Model 8 Ser/No 65543-967

Will the person who borrowed this item please contact Mr W Glasgow, R12 Electrical Work Shop, Ext 321

FILM NOTICE - It is Period 5. Colour Strip - YELLOW for 8y films and fast neutron packs. Please check that you are wearing the correct dosimeter.

Next film change - 18 May 1970.

EXTERNAL COURSE - The Borough Polytechnic, London S E 1 have announced details of a two-day course on "Modern Methods of Voltage Measurement" - on 17-18 June 1970. Further details can be obtained from Mrs R A Jeans, R20, Ext 555.

SCIENTIFIC ADMIN NOTICE - The practice of obtaining tickets for exhibitions for issue to members of staff has been discontinued. The only exceptions are the Physical Society Exhibition and certain Open Days. A monthly Exhibition Bulletin, listing both home and overseas exhibitions, can be seen in Room 42, R20.

OVERSEAS VISITS - Mr W T Smith to Cologne and Karlsruhe, 11-13 May, for discussions on refrigeration problems and Helium gas pumps. Mr D Morgan, to Paris, 11-16 May, to visit Faculte de Science and Saclay and to attend a colloquium on "High Multiplicity Hadronic Interactions" at the Ecole Polytechnique.

Dr P R Williams, Mr J H Foster and Mr E W Fitzharris, to CERN, 11-12 May for discussions on target collaboration.

Dr R J N Phillips, to CERN, 12-19 May, for discussions and to attend Omega Project Meeting.

Dr N Lipman and Dr T G Walker, to CERN, 13-15 May, for discussions on Omega Project.

Mr J T Delury and Mr H Hadley, to the U S A, 11-17 May, for various discussions and meetings on space projects.

Machine Schedules

NIMROD Cycle 5 (28.4.70 - 19.5.70)

Machine Physics: High Energy Physics (X1/K9, X3/π8, X3/K15 and π7)

Full details of Cycle 5 were given in Bulletin No 16/70.

Internal Events

Mon, 11 May, 11.30 a.m. Lecture Theatre	Nimrod Lecture Series	Dr A Werbrouk (Turin)	Analysis of Multi-Body Meson Resonance Decays.
Wed, 13 May, 11 a.m. Conf. Rm., R 1	H E P Disc Grp	Dr N Middlemas (RHEL)	Progress Report on Search for New Low Mass Particles
Wed, 13 May, 3.15 p.m. Lecture Theatre	Rutherford Laboratory Lecture	Dr E F Schumacher (Economic Advisor to the Coal Board)	Intermediate Technology - the Missing Factor In Overseas Aid (see Gen. News for details)

Wed, 13 May, 12.40 p.m.
Thurs, 14 May, 1.15 p.m.
Lecture Theatre

Film Show

NIMROD Part 2

In Part 2, Dr Pickavance continues the story and deals with the design and construction of Nimrod up to the point of the actual commissioning of the machine.

There will be no lecture in the Nimrod series on 18 May.

External Events

Mon, 11 May, 4.15 p.m. QMC, London	Theor. Phys Seminar	Dr B Renner (Cambridge)	Chiral Symmetry and Duality: Is There any Relationship.
Mon, 11 May, 5.00 p.m. Univ of Reading	Colloq	Prof R H Dalitz (Oxford)	Patterns in Elementary Particle Phenomena
Mon, 11 May, 5.00 p.m. Univ. of Bristol	Phys and Geo-Phys Colloq	Dr D H Matthews (Cambridge)	Submarine Crystal Movements: To and Fro and Up and Down
Tues, 12 May, 2.30 p.m. 21 Banbury Road, Oxford	Nucl. Phys. Seminar	Mr P Hudson (Oxford)	Superconducting Magnets
Tues, 12 May, 7.45 p.m., Univ of Reading	British Computer Soc. Branch Meeting	A Sutcliffe (I C L Bracknell)	Computers and Music
Thurs, 14 May, 4.15 p.m., Clarendon Lab, Oxford	Theor Phys Seminar	Prof P T Landsberg (Cardiff)	Relativistic Statistical Mechanics
Fri, 15 May, 2.30 p.m., Clarendon Lab, Oxford	High Energy Theory Seminar	Prof J C Polkinghorne (Cambridge)	The Scaling Law for Deep Inelastic Scattering in a Veneziano - like Amplitude Involving Two Conserved Currents.

EVENT AT AERE

Tues, 12 May, 2.00 p.m., Conf. Rm. Bldg 8.9	Theor Phys Seminar	Prof N H March (Sheffield)	Title to be announced.
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Social News

RECORD SOCIETY - Tues, 12 May, 12.30 p.m., Lecture Theatre.

Popular tunes played on the guitar by Wout Steenhuis

CHRISTIAN FELLOWSHIP - Fri., 15 May, 12.30 p.m., Conf., Rm., R12.
Come along and hear different members of the staff tell "Why I am a Christian".

Rutherford Laboratory

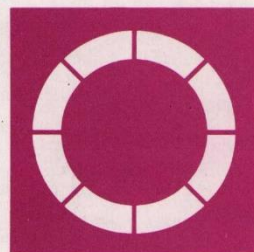
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H F NORRIS Ext 484
Scientific Admin Group
Building R20

STOP PRESS - Christian Fellowship Fri, 8 May, 12.30 p.m., Conf. Rm., R12. Change of programme. - Bible Study on Romans, chapters 1-3, led by John Matthews.

SAW

No 19/70
18 May 70



Rutherford Laboratory Bulletin

General News

BULLETIN NOTICE - The current issue will cover a period of two weeks. The next issue No 20/70 will be published on Friday, 29 May.

STAFF VISITS - The present cycle of staff visits terminated on 14 May 1970. The areas visited have been Nimrod; Experiments in Halls 2 and 3; Scanning Laboratory; HPD and the 360/75 Computer. Due to the preparation for the July Open-Days, it has been decided to start the next cycle of staff visits in the Autumn.

It would be appreciated if staff who have attended these visits would forward any comments on the quality, timing and frequency of these visits to Mr F Harden, Building R20. This information may assist in future planning.

SPRING HOLIDAY 1970 - COMPUTING ARRANGEMENTS

1 The central computer will not be available for normal users from 2330 hours on Friday, 22 May to 0830 hours on Wednesday, 27 May.

2 Special shifts will be run as necessary during this period to deal with any outstanding work.

3 Sunday, 24 May to Tuesday, 26 May (up to 2300 hours) will be utilised for outstanding hardware modifications.

ASPECTS OF ELECTRONICS IN INSTRUMENTATION - The University of Salford is running an intensive four-day course on this subject intended for professional engineers and others with an interest in instrumentation. It will be held at the University from 29 June - 2 July. Further details from Mrs R A Jeans, Room 77, R20, Ext 555.

FILM NOTICE - Period 6 commences 18 May. Colour Strip - BROWN for β films and fast neutron packs. Please change your films promptly and return all old ones.

MISSING EQUIPMENT - The following item of equipment has been reported missing from either Lab 1, R1 or the K14A local control room:-

Air Blower, Type 3-1/2516, Ser/No 12993

Anyone with information on the present whereabouts of this item is asked to contact Mrs Didriksen, Ext 443.

SUGGESTION AWARDS - At the recent meeting of the Suggestion Awards Committee the following awards were made:-

Name	Department	Award
C Richardson	Nimrod Elect/Workshop R2	£20 0 0
D Wood	HEP R43	£10 0 0
T Morgan	CES R9	(£5 0 0
		(£1 10 0
J J Dixon	Nimrod Power Supplies R3	£3 0 0
N Martindale	ESD R18	£3 0 0
L L Ryman	Nimrod R2	£3 0 0
H Webb	ESD R9	£3 0 0
F V Macavoy	Nimrod Power Supplies R3	£1 10 0

OVERSEAS VISITS - The Director, to Geneva, 18-19 May, to attend meeting of the Executive Committee of the European Physical Society. Mr D Morgan, to Germany, 18-24 May, to attend the Ruhstein Meeting on Low-Energy Hadron Interactions. Dr J D Lawson to Hamburg, 18-27 May, to attend the International Magnet Conference after which he will visit the USSR for lectures and discussions at Soviet Laboratories at the invitation of the Academy of Sciences. The following will be attending the International Magnet Conference which is being held at Hamburg from 18-23 May:- Mr A T Gresham, Mr R Tolcher, Mr H Hadley, Mr G B Stapleton, Mr N J Diserens, Dr J H Coupland, Mr J M Dawson, Mr B Broadman, Mr R T Elliott. Also Mr P T M Cleve will be joining Mr R L Roberts, Mr W J Tallis and Mr C W Trowbridge at the International Cryogenic Engineering Conference in West Berlin 25-27 May. Dr P K Kabir, to Czechoslovakia, 24-31 May, to visit and give lectures at the Nuclear Research Institute of the Academy of Sciences and the Charles University, Prague.

Machine Schedules

NIMROD Cycle 6 (19 5 70 - 9 6 70)

Machine Physics. Development of New Extraction Techniques in X3.

Internal Events

A lecture in the Nimrod Series on Monday 18 May has now been arranged as follows:-

Mon, 18 May, 11.30 am Lecture Theatre	Nimrod Lecture Series	Dr I Butterworth (RHEL)	Report on the APS and Philadelphia Meson Meeting
Mon, 18 May, 2.15 pm Lecture Theatre	Nimrod Proposal Lecture	Proposal No 81 (Glasgow U/RHEL)	"A Proposal to Measure the Polarization in the Reaction $\pi^+ p \rightarrow \pi^+ p \pi^0 n$ in the Momentum Range 0.6-3.5 GeV/c". The lecture will be given by Dr J J Thresher.
Wed, 20 May 11.00 am Conference Room R1	HEP Disc Group	W A Rankin (Manchester)	Analysis of Pion Photoproduction in the Resonance Regions

Wed, 20 May 12.40 pm
Thurs, 21 May 1.15 pm
Lecture Theatre

Film Show

Nimrod Part 3 - How Is the Research Done

Dr Pickavance now tells how a research programme has to be planned and experiments set up and Dr Thresher continues the story with a description of the K7 experiment.

Wed, 27 May 11 am
Conference Room R1

HEP Disc Group

Dr K Lassila

Status of the A^2 Meson: An Experimental and
(RHEL and Iowa State Univ) Theoretical Survey

Wed, 27 May 12.40 pm
Thurs, 28 May 1.15 pm
Lecture Theatre

Film Show

Nimrod Part 4 - The K7 Experiment

In this, the last part, Dr Pickavance concludes the story of Nimrod and describes some of the apparatus used by the high energy physicists.

Mon, 1 June 11.30 am
Lecture Theatre

Nimrod Lecture Series

Prof G Kane
(RHEL and Michigan)

The Structure of High Energy Scattering -
Experimental and Theoretical

External Events

Mon, 18 May, 5 pm
Univ. of Reading

Colloquium

Prof P S Farago
(Edinburgh)

Experiments with Polarized Electrons

Tues, 19 May 2 pm
Daresbury Laboratory

Lecture Series

Prof R G Moorhouse
(Glasgow)

High Energy Photoproduction, the Quark Model
and Duality

Tues, 19 May 2.30 pm
21 Banbury Rd, Oxford

Nucl. Phys Seminar

Dr J B Taylor (Culham)

Developments in Nuclear Fusion: Stability
and Confinement of High Temperature Plasmas

Thurs, 21 May 8.30 pm
21 Banbury Rd, Oxford

Seminar in Elementary
Particle Physics

Dr J H Mulvey

The Present Status of the Delta Meson

Fri, 22 May 2.30 pm
Clarendon Lab, Oxford

High Energy Theory
Seminar

Dr I J R Aitchison

Particle - Resonance Scattering

Tues, 26 May 2.30 pm
21 Banbury Rd, Oxford

Nucl Phys Seminar

Prof S G Cohen
(Hebrew University)

Production of Photon Pairs in the Interaction
of 1 MeV γ Rays with Matter

EVENTS AT AERE

Mon, 18 May 2 pm
Conference Room Bld 8.9

Theor Phys Seminar

Dr R J Elliott
(Oxford)

Excitations in Random Alloys

Wed, 27 May 2 pm
Conference Room Bld 8.9

Theor Phys Seminar

Dr P Gray (Univ. of
East Anglia)

The Use of Projection Operators in Classical
Kinetic Theory

Social News

RECORD SOCIETY - Tuesday, 19 May 12.30 pm, Lecture Theatre.

For the last concert in the 1969-70 Season the Record Society has chosen one of the 'greats' in classical music.

Symphony No 9 in D Minor (Choral) Op 125 - Beethoven

Jascha Horenstein conducting the Pro Musica Symphony, Vienna and the Singverein der Gesellschaft der Musikfreunde, Vienna in a remarkable compact version of this work.

CHRISTIAN FELLOWSHIP - 12.30 pm, Friday, 22 May, Conference Room, R12.

Dennis Williams will be leading a Bible Study on Christ's last command "Go.....and preach".

12.30 pm, Friday 29 May, Conference Room, R12. Meeting being arranged - details not known at time of going to press.

AERE HORTICULTURAL SOCIETY - It is expected that the Trading Hut will be open each lunch time during the week commencing Monday 18 May.

VISIT TO THE SAVILL GARDEN, WINDSOR - The visit will now take place on Sunday 7 June. The coach will leave Harwell Main Gate at 1.30 pm and the cost will be 12/6 for adults and 6/6 for children. Further details from Mrs O Collett, Ext 72-5017.

Rutherford Laboratory

15 5 70

H F NORRIS Ext 484
Scientific Admin Group
Building R20

jmw