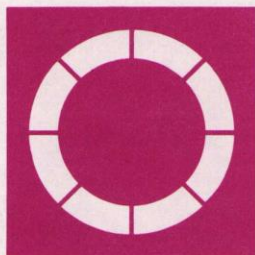


No. 24/68
1 July 68



Rutherford Laboratory Bulletin

General News

RADIATION PROTECTION NOTICE - FILM ISSUES. Period 7 commenced Monday, 17 June. Colour Strip - BLUE for $\beta\gamma$ and fast neutron films. Please check that you are wearing the correct films and that all old films are returned promptly.

ROAD WORKS AT ASHRIDGE HILL. The Berkshire County Council say that the A.34 will be closed to traffic between Beedon Hill and East Ilsley for 24 hours from 6 p.m. on Sunday, 30 June. Diversions will be sign-posted.

VISITORS. Twenty-eight sixth-form pupils from the Brune Park School, Gosport, will visit the Laboratory on Saturday 6 July.

VACATION AND SANDWICH COURSE STUDENTS AT THE RUTHERFORD AND ATLAS LABORATORIES.

A series of seven lectures, covering such subjects as accelerators, high energy physics and computer aspects, to be given by senior staff, has been arranged during July 1968, when most of the students are at the Rutherford and Atlas Laboratories. Each student and his supervisor will receive a copy of the proposed programme and all students are invited to attend.

Details of tours of Nimrod, P.L.A. and Atlas will be promulgated separately. Any queries concerning the above should be directed to Mr. F. Harden, Building R.2, Ext. 6114.

RUTHERFORD LABORATORY REPORTS. Requests for individual retention copies of reports, memoranda and preprints should, in future, be made to Library Issue Desk in R.20 (Ext: 384).

OVERSEAS VISITS. Dr. G. Manning to CERN, 30 June - 2 July, to attend E.E.C. Meeting.

Dr. G.H. Stafford to CERN, 2 - 3 July, to attend meeting of Nuclear Physics Research Committee.

Machine Schedules

NIMROD Cycle 9 (2.7.68. - 30.7.68.)

Machine Physics
High Energy Physics

<u>Team</u>	<u>Beam</u>	<u>Experiment</u>	
Birmingham U/RHEL or Westfield Coll/Imp.Coll.	X1/K9	π^+ p Interaction, 4 GeV/c, Hydrogen B/C	Data
	X1/K9	π^+ p Interactions, 1.1 - 1.9 GeV/c, Hydrogen B/C	Data
UCL/CERN/Brussels U.	X2/K11	K^- Interactions in the Heavy Liquid B/C	Setting up
Birmingham U.	X2/K12	K^- Differential Cross-sections from 0.45 to 0.85 GeV/c	Setting up
Cambridge U/RHEL	X2/K13	Test of $\Delta S = \Delta Q$ Interactions in the Decay of K^0 Mesons	Data
Westfield Coll/RHEL	X2/K14	Measurement of the Non-leptonic Decay of the Parameter of the Σ^+	Setting up
RHEL	X2/K14A	Study of the Polarization Effects in π^+ p Scattering.	Setting up
QMC/AERE/RHEL	π^+	A Study of the Σ Beta Decay	Data
UCL/RHEL	K8	K^- p Differential Cross-sections from 0.85 to 2.2 GeV/c	Setting up/Data
Imp. Coll/Southampton	π^+	An Investigation of Narrow Bosons Produced in π p Collisions.	Setting up

P.L.A.

<u>Date</u>	<u>Team</u>	<u>Experiment</u>
1-4 July	Prof. Greenlees	Polarization Measurements in Elastic Scattering
5-16 July	Manchester U.	Polarization of Elastic Scattering from Zr Isotopes.

Internal Events

Mon. 1 July, 11.45 a.m. Lecture Theatre	Nimrod Lecture Series	Dr. A. Hewish (Cambridge)	Pulsed Radio Sources (Revised title)
Tues. 2 July, 12 - 1.15 p.m. Lecture Theatre	Lecture for Experimentalists	Dr. A. Astbury	Part 2: Leptonic Decays of Baryons.

Wed. 3 July, 11 a.m.
Conf. Room, R.1

H.E.P. Disc.
Grp.

Dr. P. Landshoff
(Cambridge)

Photons in the S-Matrix

Thurs. 4 July, 11.15 a.m.
Conf. Room, R.1

Special H.E.P.
Disc Group

Prof. R.J. Eden
(Cambridge)

Phase Contours of Scattering
Amplitudes

Thurs. 4 July, 2 p.m.
Lecture Theatre

Special Lecture

Dr. G. Manning will give a report on the recent Intersecting Storage Ring Users Meeting at CERN. This is intended for all those interested in the utilization of the I.S.R. facilities. The talk will be followed by questions and discussion.

Mon. 8 July, 11.45 p.m.
Lecture Theatre

Nimrod Lecture
Series

Dr. D.M. Binnie
(Imp. Coll.)

Measurement of the Partial Width
of the Decay $\phi \rightarrow e^+ + e^-$

Social News

CHRISTIAN FELLOWSHIP. 12.30 p.m., Fri., 5 July, P.L.A. Conf. Room, R.12.

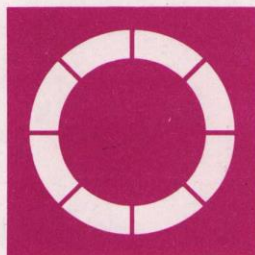
Annual General Meeting. (All members are asked to make a special effort to attend).

H. F. Norris Ext: 484

Scientific Admin. Group
Building R.20.

Rutherford Laboratory.
28.6.68.

No. 25/68
8 July 68



Rutherford Laboratory Bulletin

General News

VACATION AND SANDWICH COURSE STUDENTS AT THE RUTHERFORD AND ATLAS LABORATORIES.

A series of seven lectures, covering such subjects as accelerators, high energy physics and computer aspects, to be given by senior staff, has been arranged during July 1968, when most of the students are at the Rutherford and Atlas Laboratories. Each student and his supervisor will receive a copy of the proposed programme and all students are invited to attend.

Details of tours of Nimrod, P.L.A. and Atlas will be promulgated separately. Any queries concerning the above should be directed to Mr. F. Harden, Building R.2, Ext. 6114.

RADIATION PROTECTION NOTICE - FILM ISSUES. It is Period 7. Colour Strip - BLUE for $\beta\gamma$ and fast neutron films. Please check that you are wearing the correct film.

Next film change - Monday, 15 July.

QUEST 3. The third issue of 'Quest' is expected by the time this appears in print. A further improvement in the lay-out, printing and balance of content is confidently expected. Whether you agree or disagree with this statement, please give your views to the local Correspondent, H.F. Norris, Rm. 42, Bldg R.20, Ext. 484. Before you put pencil to paper or pick up the phone, please remember that 'Quest' is not a house magazine designed for one particular laboratory, therefore it cannot carry the same type of news as 'Orbit'. What it does aim to do is to explain in fairly non-scientific language the many facets of the Science Research Council's responsibilities. On the lighter side, Newsfront, people and their pastimes etc. will, it is hoped, deal with items of interest about S.R.C. staff. Success on this side can only be achieved if staff are prepared to co-operate by providing news etc.

ADMINISTRATION NOTICE - DIRECTOR'S GARDEN PARTY. One of the last guests to leave the Director's Garden Party found that his raincoat had been taken and another left in lieu. The raincoat left is plastic, black/charcoal and would fit someone of height 6' - 6'6". If any member of the Laboratory who attended finds that he mistakenly took the wrong raincoat, will he please contact Mr. R.C. Pepperell, Scientific Admin. Bldg R.20 (Ext. 6297).

OVERSEAS VISITS. Dr. R.J.N. Phillips to Copenhagen, 7 - 13 July, to lecture at the symposium on high energy physics.

Mr. J. D. Lawson and Dr. P.F. Smith to the Brookhaven National Laboratory, U.S.A. 7 - 20 July, to attend Summer Study on Superconducting Devices and Accelerators and to give invited papers.

Mr. R.A. Atkinson to CERN, 9 - 13 July, to assess aspects of computer and data highway control systems in relation to probable use on Nimrod.

OXFORD KINEMATICAL TABLES. Copies of the publication (13 volumes per set) are available on issue to members of staff or University visitors. Further information may be obtained from B.E. Kingdon, R.20, Ext. 6297.

Machine Schedules

NIMROD Cycle 9 (2.7.68 - 30.7.68)

Machine Physics:

High Energy Physics: (X1/K9, K11, K12, K13, K14, K14A, π_4 , K8 and π_7).

Full details of Cycle 9 were given in Bulletin No. 24/68.

P.L.A.

<u>Date</u>	<u>Team</u>	<u>Experiment</u>
8 - 16 July	Manchester U.	Polarization of Elastic Scattering from Zr. Isotopes.
Mon., 8 July, 11.45 a.m. Lecture Theatre	Nimrod Lecture Series	Dr. D.M. Binnie (Imp. Coll.) Measurement of the Partial Width of the Decay $\phi \rightarrow \pi^+ + \pi^-$.
Tues. 9 July, 12 - 1.15 p.m. Lecture Theatre	Lecture for Experimentalists	Dr. A. Astbury Part 3: Leptonic Decays of Baryons.
Wed. 10 July, 11 a.m. Conf. Rm. R.1.	H.E.P. Disc Grp.	Dr. P.B. Jones (Oxford) Experimental Test of CP in $K \rightarrow 2\pi\gamma$, $K \rightarrow 3\pi$.
Thurs. 11 July, 3.15 p.m. Lecture Theatre	Rutherford Laboratory lecture	Dr. R.S. Pease (Director, Culham Laboratory) The Quest for Controlled Thermonuclear Power.
Mon. 15 July, 11.45 a.m. Lecture Theatre	Nimrod Lecture Series	Dr. P. Mittner (CERN) Eta Decay

Social News

EVENING CRICKET RESULT - Thurs. 27 June.

R.2 Mech. D.O. (Latrinos) 72 for 6 (L. Denton 37 n.o.)

Tech. Design and Tool Co. - 54 for 7.

S.R.C. SPORTS DAY. The first ever S.R.C. Sports Day will be held at Chiswick on Wednesday, 17 July. The Rutherford Laboratory will be represented by a cricket team plus several entrants for the tennis tournament, and the Atlas Laboratory by a cricket team. A coach carrying the competitors will leave the Laboratory at midday on 17 July.

The Sports Day has been organised and sponsored by the Recreational Societies of the various S.R.C. establishments for the benefit of and participation by all S.R.C. personnel. The Management have agreed that time off will be granted to a limited number of supporters (enough to fill the coach) provided that permission to attend is first obtained from their Group Leaders. As supporters are expected to travel at their own expense, they will be required to pay for their seats on the coach (this charge is reduced for Society members).

To obtain a seat on the coach, please contact E.W. Clark, Ext. 6290, not later than Friday, 12 July.

CHRISTIAN FELLOWSHIP. 12.30 p.m. Fri., 12 July, P.L.A. Conf. Rm., R.12.

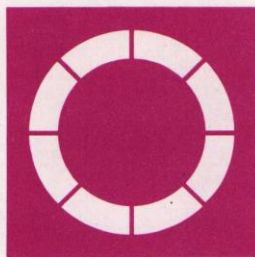
Bible Study, led by Robin Elliott of the Nimrod Beams Physics Group.

All are welcome to this and any of the Fellowship meetings.

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

Rutherford Laboratory
5.7.68.

No. 26/68
15 July 68



Rutherford Laboratory Bulletin

General News

BULLETIN PUBLICATION. Starting with the issue dated 29 July, the Bulletin will be published at fortnightly intervals for the rest of the summer until further notice.

RADIATION PROTECTION NOTICE - FILM ISSUES. Period 8 commences Monday, 15 July. Colour Strip - YELLOW for β^+ and fast neutron films. Please change films promptly and make sure all old ones are returned.

OXFORD KINEMATICAL TABLES. Copies of this publication (13 volumes per set) are available on issue to members of staff and University visitors. Further information may be obtained from B. E. Kingdon, R.20, Ext. 6297.

LOST PROPERTY. Some Treasury Notes have been found and handed in to the Personnel Group. Enquiries should be made to Mr. D. Williams, Room 67, Building R.20, Ext. 495.

OVERSEAS VISITS. Dr. N. H. Lipman, Dr. C. D. Froggatt and Dr. J. H. Field will attend the "Ettore Majorana" International School of Physics at Erice, Sicily, on 13th - 28th July, where Dr. Lipman will give a lecture.
Mr. S. C. Maskell will visit CERN for three weeks commencing 15th July, to supervise a computer installation for an experiment by Dr. Thresher's group.

Machine Schedules

NIMROD Cycle 9 (2.7.68 - 30.7.68)

Machine Physics:

High Energy Physics: (X1/K9, K11, K12, K13, K14, K14A, K14, K8 and K7).

Full details of Cycle 9 were given in Bulletin No. 24/68.

P.L.A.

<u>Date</u>	<u>Team</u>	<u>Experiment</u>
15-16 July	Manchester Univ.	Polarization of Elastic Scattering from Zr Isotopes.
17 July		Maintenance.
18-28 July	Prof. Greenlees	Polarization Measurements in Elastic Scattering.

Internal Events

Mon., 15 July, 11.45 a.m., Lecture Theatre	Nimrod Lecture Series	Dr. P. Mittner (CERN)	Eta Decay.
Tues., 16 July, 12-1.15 p.m., Lecture Theatre	Lecture for Experimentalists	Dr. T. Quirk (Oxford Univ.)	K ₂ and K ₃ Decays.
Wed., 17 July, 11 a.m. Conf. Rm., R.1	H.E.P. Disc. Group	Dr. A. J. Macfarlane (Cambridge Univ.)	Field Theories with Chiral Symmetry.
Mon., 22 July, 11.45 a.m. Lecture Theatre	Nimrod Lecture Series		(to be announced).

Social News

EVENING CRICKET RESULT - Thursday, 4th July. (20 overs each).

R.2 Mech. D.O. (Latrinos) 76 for 9.
R.2 Elect. D.O. 65.

After the game the Cricket Club Secretary was heard to remark, "The best team won!".

S.R.C. SPORTS DAY. Wednesday, 17th July at Chiswick. Please see last week's Bulletin for details. A few seats on the coach are still available, and anyone interested should contact E. W. Clark, Ext. 6290, as soon as possible.

CHRISTIAN FELLOWSHIP. 12.30 p.m. Friday, 19 July, P.L.A. Conf. Room, R.12.

Bible Study on "Eternal Life", led by E. J. D. Newbold of Personnel Group. All are welcome.

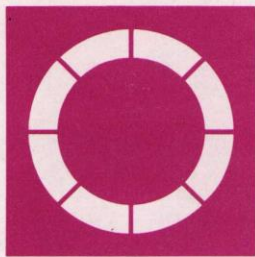
B. E. Kingdom, Ext. 6297
Scientific Admin. Group,
Building R.20.

Rutherford Laboratory.

12.7.68

cs

No. 27/68
22 July 68



Rutherford Laboratory Bulletin

General News

OBITUARY NOTICE. We deeply regret to announce the death of Mr. D.M. Monypenny of the Nimrod General Physics Group on Sunday, 14 July. Di Monypenny who was aged 62 joined AERE in 1955 as an S.A., becoming an S.S.A. in Research Group in 1957. He worked in the Nimrod Injector Group, transferring to the Laboratory in 1961, and later worked on ion sources and pre-injectors in the Nimrod General Physics Group. He was a popular and cheerful person who will be sadly missed by all his colleagues. Our deepest sympathy is extended to his wife and family.

RADIATION PROTECTION NOTICE - FILM ISSUES. Period 8 commenced Monday, 15 July. Colour Strip - YELLOW for $\beta\gamma$ and fast neutron films. Please check that you are wearing the correct films and that all old films are returned promptly.

FUTURE SCIENTISTS AT THE LABORATORY? For the next two weeks a party of fifteen fourth form students, mainly from schools in the Reading area, will be visiting the Laboratory.

On Monday, 22 July and Friday, 2 August, a programme of tours and discussions has been arranged. For the rest of their stay, the students will participate in some of the work in selected areas of the Laboratory. The object of the visit is to stimulate their interest in science and technology.

BULLETIN PUBLICATION. Starting with the next issue dated 29 July, the Bulletin will be published at fortnightly intervals for the rest of the summer. Contributions for this Bulletin should be sent to the Editor by Wednesday, 24 July.

OVERSEAS VISITS. Dr. S.Y. Lo to Germany, 22 July - 2 August, to attend the Summer School at the University of Karlsruhe.

Machine Schedules

NIMROD Cycle 9 (2.7.68 - 30.7.68)

Machine Physics:

High Energy Physics: (X1/K9, K11, K12, K13, K14, K14A, π_4 , K8 and π_7)

Full details of Cycle 9 were given in Bulletin No. 24/68

P.L.A.

Date

Team

Experiment

22-28 July

Prof. Greenlees

Polarization Measurements in Elastic Scattering

Internal Events

There will be no lecture in the Nimrod Series on Monday, 22 July.

The first series of Lectures for Experimentalists has now ended. The next series will commence during September.

Wed, 24 July, 11 a.m. Conf. Rm. R1	H.E.P. Disc Grp	Dr. G. Shaw (RHEL)	Phenomenological Bounds on $\pi - \pi$ Scattering Lengths
Tues, 30 July 11.45 a.m. Lecture Theatre	Nimrod Lecture Series	Dr. F.C. Khanna (Chalk River)	Short Range Nucleon - Nucleon Correlations in Nuclei

Please note change of day for this event, which is the last lecture in the present series until sometime in September.

EVENT AT THE ATLAS LABORATORY

Wed, 24 July

Talk

Dr. D.B. Russell
(Atlas Lab)

LISP as a Programming Language

2.30 p.m. Conf. Rm.

Social News

S.R.C. SPORTS DAY. Last Wednesday, the Civil Service Sports Ground at Chiswick provided the setting for the first ever SRC Sports Day. The heading for this account could well have been 'Cricket, Lovely Cricket' as the Laboratory Cricket team returned with Cup which had been presented by the London Office Sports and Social Club for this event.

Five teams entered for the cricket competition, representing London Office, Royal Greenwich Observatory, Radio and Space Research Station, Atlas Computing Laboratory and the Rutherford Laboratory. The competition was organised on a knock out basis, each side being limited to 15 overs.

The semi-finals resulted in London Office (75 for 1) beating Atlas, (74 for 4, Sher Datt, 29 runs) and Rutherford 60 for 6) beating R.G.O. (54 for 8). In the final London Office batted first and were all out for 44 runs, the Rutherford team passing this total, with 6 wickets down in 13 overs. The Rutherford fielding was very tight and both Mike Watson and Brian Talmage snapped up splendid catches; the Captain, Terry Keaney also took 2 wickets for 0. The top scorer for the R.L. was Mike Watson with 17, and during his innings it is darkly hinted that he ran out two of his own team.

In a play-off, Atlas beat Radio and Space, scores being RSRS 64 for 6 and Atlas 97 for 9. Atlas batsman Sher Datt scored 33, which included 6 fours in one over - some hitting!

Congratulations to the R.L. team on their success and commiseration to the Atlas who were only defeated by one run. However congratulations must be extended to Sher Datt, a summer student at the Atlas Lab for his great success with the bat - 6 fours in one over is some scoring.

The Tennis Tournament. The men's doubles event was organised in two leagues with five pairs in each. The winning pair in each league played in the final, short sets being played in the heats and a long set in the final. The men's doubles event was won by an R.G.O. pair who beat Ray Butt and Geoffery Beckwith of the R.L. 6-3. The mixed doubles, in which we had no entry, turned out to be a certain victory for RSRS as both their pairs met in the final!

From all reports, a very successful 'first' Sports Day.

The Editor, endeavouring to forestall any irate competitors, apologizes for any errors in names or numbers that may be present in this report, which only arrived in bits and pieces during Thursday morning.

EVENING CRICKET. Thursday 11 July. G.E. Taylor Ltd - 62 for 4, R2 Mech. D.O - 61.

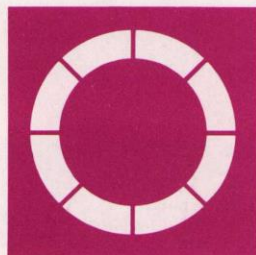
CHRISTIAN FELLOWSHIP. 12.30 p.m. Fri, 26 July, P.L.A. Conf. Room, R12

Prayer Meeting, led by Dennis Williams, Personnel Group. All are welcome.

Rutherford Laboratory
19.7.68.

H.F. Norris, Ext. 484
Scientific Administration Group,
Building R.20.

No. 28/68
29 July 68



Rutherford Laboratory Bulletin

General News

BULLETIN NOTICE. As announced in Bulletin No. 27/68 the current and subsequent issues will cover two weeks. Contributions for the next issue should be sent to the Editor by Wednesday, 7 August.

LECTURE THEATRE. Extensive alterations are to be made to the projection booth, commencing Monday, 5 August. The theatre is expected to be out of use for approximately two weeks, during which period organisers of lecture, etc., are asked to use other venues. The exception will be in the case of an important lecture necessitating a larger seating capacity than possible in Conference Rooms. In which case it is requested that the maximum advance notice be given so that interruption of the work in the Lecture Theatre can be minimised.

ROAD WORKS AT UPTON RAILWAY BRIDGE. The Berkshire County Council have found it necessary to extend the closure of the A417 by a further two weeks, up to 11 August (See Bulletin 22/68 for details of closure).

ROAD WORKS AT ASHRIDGE HILL. The closure announced in Bulletin No. 24/68 has been postponed until Sunday, 18 August. On that day the A34 will be closed to traffic between Beedon Hill and East Ilsley for 24 hours from 6 a.m. Diversions will be sign-posted.

RADIATION PROTECTION NOTICE - FILM ISSUES. It is Period 8.

Colour Strip - YELLOW.

Due to the Nimrod shut-down, fast neutron films will not be necessary. Please return all fast neutron films but retain holders.

NIMROD SHUTDOWN. Nimrod will shut down from 30 July for approximately six weeks. The main purpose of the shut-down is to re-install and commission the second alternator.

OVERSEAS VISITS. Dr. D.G. Montague to the U.S.A., 27 July - 7 August, to attend the Garden Conference on Nuclear Structure physics at Tilton, New Hampshire.

Dr. J.J. Thresher to CERN, 28-30 July, to attend Organizing Meeting for Vienna Conference and EEC meeting.

Machine Schedules

P.L.A.

Date

Team

Experiment

29-31 July

Maintenance

1-4 Aug.

Queens' Univ. Belfast
and Westfield Coll.

(p.p) on He^3 Polarization Measurements.

5-12 Aug.

King's Coll. London

Elastic Scattering from Cu^{63} , Cu^{65} , ^{16}O , & N^{14} .

Internal Events

Tues, 30 July

Nimrod Lecture
Series

Dr. F.C. Khanna
(Chalk River)

Short Range Nucleon - Nucleon
Correlations in Nuclei

11.45 a.m. Lecture Theatre

Please note change of day for this event, which is the last lecture in the present series until sometime in September.

Tues, 30 July

Special Lecture

Prof. M. Schwartz
(Stanford)

The Development of Ideas on CP Violation.

2.30 p.m. Lecture Theatre

Wed, 31 July

H.E.P. Disc. Grp.

Dr. N. Lipman

Is there $\Delta I = \frac{1}{2}$ CP Violation in K_L^0 Decay?

11 a.m. Conf. Rm., R1.

Fri, 2 Aug.

One Day Seminar

Fifth Meeting on European Collaboration Programming
for H.P.D.

9.30 a.m., Lecture Theatre

Wed, 7 Aug.

H.E.P. Disc Grp.

Dr. D.B. Lichtenberg Quark-Diquark Model of Baryons.
(Indiana U.)

11 a.m., Conf. Rm., R1.

Social News

EVENING CRICKET. (20 overs)

R2 Mech. D.O. (LATRINOS) - 160 for 7

R2 Workshop - 83 for 6

The LATRINOS with 160 for 7 (8 runs per over) achieved the highest score this season which was hard luck on the R2 Workshop, as this was the first time they have managed to get a team together.

CHRISTIAN FELLOWSHIP. Friday, 2 August: "The New Birth". Bible Study, Led by J.L. Thomas of the Nimrod General Physics.

Friday, 9 August: Talk by the Rev. David Price of Christchurch, Northcourt, Abingdon.

Both meetings will be held in the P.L.A. Conference Room, R12 at 12.30 p.m. A warm invitation is extended to all.

Rutherford Laboratory
26.7.68.

H.F. Norris, Ext. 489
Scientific Administration Group,
Building R.20.