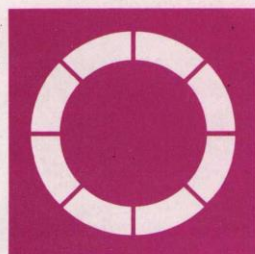


25/69  
7 July 69



# Rutherford Laboratory R 20 **Bulletin**

## General News

**VISITORS.** 15 members of the lecturing staff of Enfield College of Technology will visit the Laboratory on Wednesday afternoon, 9 July.

20 members of the Association of Ladies Clubs, Newbury, will visit the Laboratory on Saturday afternoon, 12 July.

**OVERSEAS VISITS.** Mr. M.J. Cawthraw, to Vienna, 6-9 July, to read a paper at an ESONE (Electronics Standards Organisation for Nuclear Electronics) CAMAC Meeting.

Dr. L.C.W. Hobbs, to CERN, 10-15 July, to attend meetings of the 300 GeV Accelerator Committee Group and the 300 GeV Ejection Study Group.

**FILM NOTICE.** It is Period 7. Colour Strip - GREEN for  $\beta^+$  and fast neutron films. Please make sure you are wearing the correct films and that all old ones are returned.

**MISSING EQUIPMENT.** The following items of Wayne Kerr equipment are missing from Lab. G36-38 in Building R.25:

V.H.F. Admittance Bridge, Type B.801B, plus its associated Transistor Adaptor, Type 801A and D.C. Control Unit, Type Q801.

Anyone with information on the present location of these items is asked to contact Mr. E.G. Sandels, R.25, Ext. 458 or 6133.

**CONFERENCES.** Details have been received of the following:-

B.S.S.M. Symposium on "Engineering Uses of Strain Measurement". 8-11 September, at the University of Strathclyde, Glasgow.

I.P.P.S. One-day Conference on "The Measurement of Total Pressures in Ultra-high Vacuum". Wednesday, 10 December at the University of Aston, Birmingham.

Further information is available from B.E. Kingdon, R.20, Ext. 6297.

## Machine Schedules

NIMROD Cycle 7 (24.6.69.-15.7.69.)

Machine Physics; High Energy Physics (K8, K9 and K10S).  
Full details of Cycle 7 were given in Bulletin No. 23/69.

### P.L.A.

| <u>Date</u> | <u>Team</u>      | <u>Experiment</u>                               |
|-------------|------------------|---|
| 8-12 July   | Oxford Univ.     | $F^{19}(p, He^3) O^{17}$ Reaction Measurements. |
| 13-20 July  | Birmingham Univ. | Proton Elastic Scattering from $O^{16}$ .       |

## Internal Events

Mon., 7 July, 11.30 a.m., Nimrod Lecture Series Prof. P. Fowler (Bristol Univ.) Very Heavy Elements in the Primary Cosmic Rays.

Wed., 9 July, 10 a.m.-4 pm, adjacent to Bldg. R.25: Visit of Marconi Instrument Co. Mobile Exhibition Vehicle. A wide range of electronic test equipment will be on display. Further details are obtainable from B.E. Kingdon, R.20, Ext. 6297.

(Details of a possible H.E.P. Discussion Group Meeting on Wed., 9 July may be circulated later).

Mon., 14 July, 11.30 a.m., Nimrod Lecture Series Prof. A.B. Clegg (Lancaster Univ.) Utilisation Study of the NINA Booster

## External Events

Mon., 7 July, 4.15 p.m. Theor. Physics Seminar Prof. R.D. Amado (Univ. of Pennsylvania) Final State Interaction Effects in Weak Three-Body Decays.

7-10 July: International Sheet Metal Exhibition, Olympia, London.

## Social News

**CHRISTIAN FELLOWSHIP.** What does the Christian think and feel about the problems of the modern world? The Fellowship meeting on Friday, 11 July, "Christian Viewpoint", will provide a chance for discussion under the chairmanship of Frank Smith. Join us in the P.L.A. Conference Room, R.12 at 12.30 p.m. for a stimulating and thought-provoking half-hour.

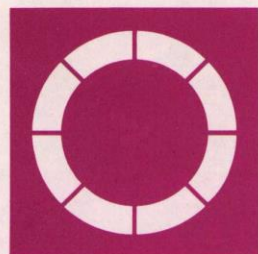
**STOP PRESS - S.R.C. SPORTS DAY (2 July):**

RHEL retained the Cricket Cup and also won the Bowls Tournament (for the first time). We reached the Final in the 6-a-side Football (won by DNPL) and did well in the Tennis.

Congratulations! A full account will appear in next week's Bulletin.



No. 26/69  
14 July 69



# Rutherford Laboratory Bulletin

## General News

**VISITORS.** A group of 10 physicists from the University of Valencia will visit the Laboratory on Friday, 11 July.

16 members of the Magnet Design Course at the Post-Graduate Education Centre, A.E.R.E., will visit the Laboratory on Thursday, 17 July.

**FILM NOTICE.** Period 8 commences Monday, 14 July. Colour Strip - PURPLE for  $\beta\gamma$  and fast neutron films. TLD dosimeters will be renewed for people with surnames commencing with C, D, E and F. Please change films promptly and return all old ones.

**MUSICARAMA** - BBC 2, Sunday, 20 July at 8.15 p.m. (moon-shot permitting!). This programme is a re-interpretation of Ravel's orchestral version of Mussorgsky's "Pictures at an Exhibition", by means of specially filmed sequences depicting many aspects of modern life and technology. Some of the filming was done at the Laboratory, and scenes shot in the P.L.A., the Nimrod magnet room and the K13 experiment have been used to illustrate parts of the two final episodes, "Baba Yaga" and "The Great Gate of Kiev".

**OVERSEAS VISITS.** Dr. J. Ranft, to CERN, 10-16 July, to attend a meeting of the 300 GeV Ejection Study Group and for discussions Mr. J. Fox, to Vienna, CERN and Dortmund, 17-22 July, in connection with the 300 GeV project.

## Machine Schedules

**NIMROD Cycle 8 (15.7.69. - 5.8.69).** This cycle will be devoted to the setting up of the X3 extracted beam which will serve Hall 3, plus compatibility tests between X3 and other beams.

| <u>P.L.A.</u> | <u>Date</u> | <u>Team</u>      | <u>Experiment</u>                           |
|---------------|-------------|------------------|---|
|               | 14-20 July  | Birmingham Univ. | Proton Elastic Scattering from $O^{16}$ .   |
|               | 21-27 July  |                  | (Shut-down for maintenance and setting up). |

## Internal Events

|  |                          |  |   |
|--|--------------------------|--|---|
| Mon., 14 July, 11.30 a.m.,<br>Lecture Theatre    | Nimrod Lecture<br>Series | Prof. A.B. Clegg<br>(Lancaster Univ.)  | Utilisation Study of the NINA Booster   |
| Wed., 16 July, 11 a.m.,<br>Conf. Room, Bldg. R.1 | HEP Discussion<br>Group  | Mr. D. Morgan<br>(RHEL)                | Non-Evasive Chew-Low Extrapolation for the<br>Study of $\pi - \pi$ Elastic Scattering |
| Mon., 21 July, 11.30 a.m.,<br>Lecture Theatre    | Nimrod Lecture<br>Series | Prof. J. Hamilton<br>(Nordita-Denmark) | New Techniques for Pion-Nucleon Interactions  |

## Social News

**CHRISTIAN FELLOWSHIP.** It isn't fashionable to believe in Satan these days. But isn't that playing right into his hand? Join us in the PLA Conference Room., R.12, at 12.30 p.m. on Friday, 18 July for another lively discussion led by J.L. Thomas.

**Advance Notice:** Friday, 25 July, 12.30 p.m., Lecture Theatre: "Christianity in Brazil Today". Talk with colour slides by the Rev. Jim Clarke of Cote Baptist Church.

**S.R.C. SPORTS DAY.** This year's Sports Day on 2 July was a great success. As well as Cricket and Tennis, there was Six-a-Side Football and Bowls, and luckily we were blessed with good weather. 47 participants from RHEL and Atlas attended as well as 8 spectators.

**Cricket.** RHEL retained the Cricket Cup in an exciting competition. In the Prelim. Round (15 overs), RSRS (108-6) beat London Office (76 all out). In the Semi-finals (15 overs), RHEL (82-2, with P.Craske 37 n.o. and M.Watson 22) beat RGO (79 all out, with B.Blowfield 3-11 and T.Keaney 3-13). Also DNPL (86) beat RSRS (75). In the Final (15 overs), RHEL made 104-4 (P.Craske 31 and M.Yates 26 n.o.) against DNPL (91-7, with T.Keaney 3-17 and B.Blowfield 2-18). Good show, chaps!

**Bowls.** Five pairs took part in the competition, which took the form of a "drive", each pair playing four "ends" against all the other pairs. RHEL was represented by three pairs, RGO and RSRS by one pair each. After all pairs had bowled 20 ends each, the result of the competition was decided by the last wood bowled. N.Ferguson and C.Grindrod beat T.White and H.Sangster (both RHEL pairs) by one shot. Congrats. again!

**Six-a-Side Football.** This competition was divided into two Leagues:

1. Atlas, RHEL "A" and DNPL; 2. LO, RHEL "B" and RSRS. After some fine games in very hot weather, the two Leagues finished: 1. DNPL, RHEL "A", Atlas; 2. RHEL "B", RSRS, LO. In the play-off, DNPL easily beat RHEL "A" 3-0 in the Final.

**Tennis.** The Tennis players had a very hard time in the hot weather. Each pair in the Men's Doubles had six games to play, and each pair in the Mixed Doubles had eight games. Three Men's Doubles teams from RHEL took part, and Atlas Lab. provided two Mixed Doubles teams and one Men's Double. The winners of the Men's Doubles were Dr. Wilkinson and Dr. Horner (RSRS), and of the Mixed Doubles, Dr. and Mrs. Davies (RGO).

**STOP PRESS** The 20-minute colour film on Electrical Safety "On the Safe Side" will be shown in the Lecture Theatre on the following dates; Mon. 14 July at 2 p.m.; Tues., 15 July at 10.30 a.m.; Wed., 16 July at 3.30 p.m. and Fri. 18 July at 9.30 a.m. All are encouraged to see this film.

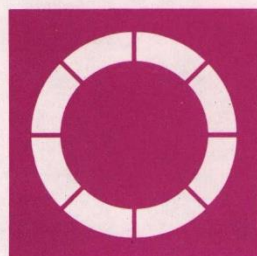
||| Fri., 11 July, 11-30 a.m., Lecture Theatre: "Final State Interaction in 3-Body Decay". Dr. R. Amado (Pennsylvania).

Rutherford Laboratory  
11.7.69

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



No. 27/69  
21 July 69



# Rutherford Laboratory Bulletin

## General News

**BULLETIN PUBLICATION.** Starting with the issue dated 28 July, the Bulletin will be published at fortnightly intervals until early September.

**FILM NOTICE.** Period 8 commenced Monday, 14 July. Colour Strip - PURPLE for  $\beta\gamma$  and fast neutron films. Please check that you are wearing the correct films and that all old films are returned.

**FOUND.** Treasury notes have been found at the following locations - Building R.20 and Hall 3. Enquiries should be made to Mr. D. Williams Personnel, Ext. 495.

**MUSICAMERA** - BBC2, Sunday, 20 July at 8.15 p.m. (in Colour). See previous Bulletin for details.

**GUIDE TO AUTHORS.** Copies of Rutherford Laboratory Memorandum RHEL/M100, "The Preparation of Scientific and Technical Documents Notes for the Guidance of Authors", may be obtained from the Library, R.20, Ext. 384.

**OVERSEAS VISTIS.** Dr. E. W. Blackmore, to CERN, 23 - 25 July, for discussions on proportional counters and experiments on the CERN S.C.

**CERN VACANCIES.** Staff are reminded that details of posts available at CERN, Geneva are received regularly in the Personnel Group, Building R.20, where they may be seen at any time on request. In particular, we have just received details of CERN Fellowships and Research Associateships. Please contact Mrs. M. C. Gould, Room 68, R.20 (Ext. 510) for further information.

## Machine Schedules

**NIMROD.** Cycle 8 (15.7.69. - 5.8.69.). This cycle will be devoted to the setting up of the X3 extracted beam which will serve Hall 3, plus compatibility tests between X3 and other beams.

**P.L.A.** The P.L.A. will be shut down from 21 - 27 July for maintenance and setting up.

## Internal Events

Mon., 21 July, 11.30 a.m.,  
Lecture Theatre

Nimrod Lecture  
Series

Prof. J. Hamilton  
(Nordita-Denmark)

New Techniques for Pion-Nuclear  
Interactions

Mon., 28 July, 11.30 a.m.,  
Lecture Theatre

Nimrod Lecture  
Series

Review of Lund Conference by Dr. I. Butterworth, Dr. C. Damerall and  
Dr. C. Oades. (The review is expected to continue after lunch).

Note: The Nimrod Lecture Series is discontinued for the month of August, but it is hoped that visitors to the Laboratory may be persuaded, at short notice, to speak at the usual Nimrod times.

## External Events

EVENTS AT A.E.R.E.

Mon., 21 July, 2 p.m.  
Conf. Rm., Bldg. 8.9

Theor. Phys.  
Seminar

Dr. E. Tuttle  
(U. of Denver)

Hartree-Fock Theory and the Ursell  
Ursell Approximation.

Thurs., 24 July, 2 p.m.  
Conf. Rm., Bldg. 8.9

Applied Maths  
Seminar

Dr. W. L. Miranker  
(Hebrew U. of Jerusalem)

A New Approach to Stiff Systems of  
Differential Equation.

## Social News

**EVENING CRICKET RESULT** - Thursday, 10 July.

R2. Mech. D.O. (Latrinos) - 126 for 8; Assorted Physicists - 80 for 7

This is a repeat of last years result; no wonder the Latrinos forecast an easy victory.

**CHRISTIAN FELLOWSHIP.** Friday 25 July, 12.30 p.m., Lecture Theatre. The Rev. J. Clarke, M.A., of Cote Baptist Church, Oxon, will speak on "Christianity in Brazil Today".

Jim Clarke, who is a native of Thame, spent eight years, until 1968, in a town in the Parana province of Brazil, where he worked for the Baptist Missionary Society. He knows this rapidly developing country intimately in its vastness, its achievements, its poverty and its spiritual hunger which can only be satisfied by Christ. The talk will be illustrated by colour slides, and questions are invited. Why not come and hear what he has to say?

Rutherford Laboratory  
18.7.69.  
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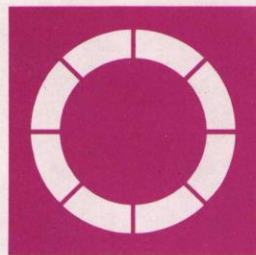
H. F. Norris. Ext. 484  
Scientific Admin. Group  
Building R.20

**STOP PRESS:-** X3 Extracted Proton Beam for Hall 3.

On Wednesday 16 July, protons were successfully extracted for the first time down the new X3 channel to hit a target in Hall 3.



No. 28/69  
28 July 69



# Rutherford Laboratory Bulletin

## General News

**BULLETIN NOTICE.** As announced in Bulletin No. 27/69, the current and subsequent issues will cover two weeks. Contribution for the next issue should be sent to the Editor by Wednesday, 6 August.

**PROPOSED 300 GeV SITE.** A copy of a special issue of the Trieste newspaper "Il Piccolo" containing publicity on the proposed 300 GeV site at Doberdo near Trieste, has been received by the Librarian. A special English/Italian supplement emphasizes the suitability of the Doberdo site. Most of the material deals with the social and industrial features of the area. The paper may be seen in the Library, Building R.20

**FILM NOTICE.** It is period 8. Colour strip - PURPLE for  $\beta\gamma$  and fast neutron films. Please check that you are wearing the correct film and that all old films are returned.

**OVERSEAS VISIT.** Miss M. J. Eggleton, to CERN, 27.7.69. to carry out a check of asset and inventory equipment being used by experimental teams at CERN.

**VACANCY.** Director for the Computing Centre at the Technical University of Norway. The new Director will primarily be concerned with the computing science activities in education, research and development. The position, which will be vacant from January 1970, is expected to be combined with a part time Professorship at the University. Further information may be obtained from Dr. J. Howlett's office, Atlas Computing Laboratory, Ext. 423.

## Machine Schedules

Nimrod Cycle 9 (5.8.69 - 26.8.69.)  
Machine Physics  
High Energy Physics

| <u>Team</u>              | <u>Beam</u> | <u>Experiment</u>   |            |
|--------------------------|-------------|---|------------|
| UCL/CERN/Brussels U.     | X2/K11      | K <sup>-</sup> Interactions in the Heavy Liquid B/C                             | Data       |
| Birmingham U/RHEL        | X2/K12      | K <sup>+</sup> p Differential Cross-section Measurements from 0.45-0.85 GeV/c   | Data       |
| Oxford U/RHEL            | X2/K14A     | Polarization Effects in $\pi^+$ Elastic Scattering                              | Setting Up |
| AERE/QMC/RHEL/Bergen     | P71         | pp Elastic Scattering at Large Angles between 1.5 and 4.0 GeV/c                 | Setting Up |
| Imp.Coll./Southampton U. | $\pi^7$     | An Investigation of Narrow Bosons Produced in $\pi$ -p Collisions               | Data       |
| Westfield Coll./RHEL     | X3/ $\pi$ 8 | Study of Associated Production of Y <sup>*</sup> 's and their Decay             | Setting Up |
| Bristol U.               | X3/K15      | K <sup>+</sup> p Differential Cross-sections Measurements from 1.07 - 2.0 GeV/c | Setting Up |

### P.L.A.

| <u>Date</u>      | <u>Team</u>  | <u>Experiment</u>   |
|------------------|--------------|---|
| 28 July - 1 Aug. | Oxford U.    | Asymmetry Measurements in Proton Elastic Scattering   |
| 2 - 10 Aug.      | King's Coll. | Polarization and Asymmetry Measurements for 30 MeV Polarized Protons Scattered from Mo <sup>92</sup> , <sup>96</sup> , and <sup>100</sup> |

## Internal Events

|  |                       |  |
|--|-----------------------|--|
| Mon. 28 July 11.30 a.m.,<br>Lecture Theatre    | Nimrod Lecture Series | Review of Lund Conference by Dr. I. Butterworth, Dr. C. Damerall and Dr. G. Oades. (The review is expected to continue after lunch). |
| Wed., 30 July 11 a.m.,<br>Conference Room, R.1 | H.E.P. Disc. Group    | Dr. P. G. H. Sanders An Experimental Limit on the Proton Electric Dipole Moment.   |

## External Events

|   |                     |  |  |
|---|---------------------|--|--|
| Fri., 8 Aug., 2 p.m.<br>Conference Room H.8                           | Nucl. Phys. Colleg. | Prof. R.C. Block<br>(Rensselaer Polytechnic Inst. USA) | Physics Work with the R.P.I. Linac                   |
| EVENT AT THE ATLAS LAB.<br>Mon., 4 Aug., 2.30 p.m.<br>Conference Room | Talk                | Lyle B. Smith<br>(CERN, DD-Division)                   | Interactive Graphics and Least Squares Data-Fitting. |



## Social News

EVENING CRICKET (20 overs) Thursday, 17 July.

R.2 Mech. D.O. (Latrinos) - 159 for 2 (P. Deosset, 46 not out). Technical Design and Tool Co. Reading - 88 all out.

CHRISTIAN FELLOWSHIP. Friday, 1 Aug., 12.30 p.m., P.L.A. Conf. Rm. R.12.

Pioneer Missionary Doctors, Collin and Margaret Bowker invite you to listen to some of their experiences whilst working in a Bush Hospital in a remote part of Tanzania.

Friday, 8 Aug., 12.30 p.m., PLA Conf. Rm, R.12.

Continuation of the discussion on "Christian Viewpoint", led by Frank Smith.

Rutherford Laboratory,  
25.7.69.

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

LDB.