

Rutherford Laboratory Bulletin

The scope of the Bulletin is to be expanded to include social news, more information of the type already covered, (e.g. the Nimrod schedule) and brief statements on Laboratory work. It is hoped that this will eventually result in a more readable, rather less formal Bulletin than has previously been issued.

It will continue to be a mainly factual news sheet, carrying Laboratory news (scientific, administrative and social) and news of events outside the Laboratory related to our work and activities.

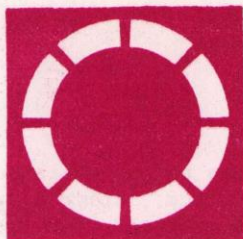
More detailed expositions of Laboratory work and social news will continue to be covered by Orbit.

Suggestions for additional material, in the categories mentioned above, that might be included in the Bulletin, can be forwarded to Mr. H.F. Norris, Room 21, Building R.20.

Information for the Bulletin for a particular week must be with Mr. Norris, by mid-day on the preceeding Wednesday. Stop-press information can be included if received by 9.00 a.m. on Thursday.

B. Southworth
Scientific Administration

No. 1/65
11 Jan 65



Rutherford Laboratory Bulletin

General News

Dr. T.G. PICKAVANCE, C.B.E. Dr. Pickavance, Director of the Rutherford High Energy Laboratory, was awarded the title of Commander of the (order of the) British Empire in the New Years' Honours List.

VISITORS Twelve visitors from South Africa, on the Abe Bailey Bursary Tour, will visit the Laboratory on Tuesday, 12 January.

LIBRARY NOTICE "Lectures on weak interactions of strongly interacting particles", by M. Gell-Mann, Tata Institute of Fundamental Research, Bombay.

This important paper was removed from the Library within a matter of a few hours of being received. Considerable trouble was involved in obtaining a copy of these lectures and only one copy was available. If anyone can assist the Library in tracing this document, would they please contact Mr. I.C.G. Sewter, Library, Building R.20.

Many documents are taken from the Library without permission or acknowledgement. These selfish or thoughtless acts are causing the Laboratory considerable inconvenience and losing the Laboratory important information.

BURSARIES Applications are invited for awards under the Royal Society and Nuffield Foundation Commonwealth Bursaries Scheme, beginning during the period July-December, 1965. The closing date for applications is 15 March, 1965. Details may be obtained from Mr. A.G. Taylor, Personnel Branch, Building R.20 (Ext. 495).

VACUUM DISCUSSION GROUP The second meeting of this group will be held in the large conference room, Building 220 on Friday, 29 January, commencing at 9.a.m. The subject will be "Vacuum Connections" and current proposals for rationalizing certain screw and flange couplings leading to the adoption of an Authority standard pattern will be outlined. Admission will be by ticket, obtainable from Mr. F.P. Moran, Room G-39, Building 424 (Ext 2723 or 2472).

EXPORT DOCUMENTS A Customs Export form, C.D. 6, No. AA426266, dated 2.12.64., relating to the despatch of a "vacuum pump group" to Paris for repairs, has been returned by the Customs with a query. The form is signed "R. Baker" (not R. Baker from Nimrod HEPE). Will Mr. Baker, or anyone who has knowledge of this equipment, please contact C.J.E. McDonald, Admin, Room 2.57, Building R.1 (Ext 223).

MISSING EQUIPMENT The instrument mentioned below was removed from Lab 1.10 between 30.12.64. and 1.1.65.

Avo Model 8. Ser. No. 47425-C-556

Will anyone with information on the whereabouts of this instrument please contact Mr. I.L. Watkins, Building R.1 Lab 1-10 (Ext. 6159).

Missing from the Nimrod Machine Physics Electronics Lab, Top-floor Building R.25 - one sack barrow made by "Crane". This barrow is painted polychromatic blue and marked R.F.

Would finder please notify Mr. T. Harper, Ext 6116 or Mr. L. Appleby Ext 373.

FOUND Small leather case containing three keys. Will owner please contact the Admin Office, Building R.12.

EXTERNAL COURSES A course of eight lectures on "Law for Scientists and Engineers" at the Borough Polytechnic on Thursday evenings at 6.30 p.m., commencing 4 February. The fee is fifty shillings. Further information may be obtained from Mrs. M.C. Gould, Personnel Branch, Building R.20 (Ext 575).

A course of ten lectures on "Electrical Control Systems" at the Borough Polytechnic on Wednesday afternoons, 1.30-4.30 p.m., commencing 20 January. The fee is fifty shillings. Further information from Mrs. M.C. Gould, Personnel Branch, Building R.20, Ext 575.

Future courses to be held at the Borough Polytechnic include the following - "Psychological Aspects of Work"; "Information for Industry and Commerce"; "Technical Writing"; "Ergonomics"; "Programmed Learning". Further details will be available later.

Brunel College announce a course of twelve meetings on "Statistical Signal Theory" for engineers and scientists on Tuesday evenings, 7.00 to 8.30 p.m., commencing Tuesday, 12 January. The fee is two guineas. Further information from Mrs. M.C. Gould, Personnel Branch, Building R.20, Ext 575.

Future courses at Brunel College include "Introduction to Computer Principles" commencing 3 May and "Advanced Aspects of Automatic Control" commencing 17 May.

OVERSEAS VISITS Dr. R.S. Gilmore (H.E.P. Division) returned to the Rutherford Laboratory on 22 December after a fifteen month attachment to the Brookhaven National Laboratory. He is now working with the Cambridge/Birmingham/R.H.E.L. team. His office is Room 2.78, Building R.1, Ext 6196.

Machine Schedules

P.L.A.

<u>Date</u>	<u>Team</u>	<u>Experiment</u>
11-14 Jan.	Birmingham Univ.	Polarization Studies
15 Jan.	-	Polarimeter Calibration
16 Jan.	Oxford Univ.	$C^{12}(p,d)C^{11}$ Reaction Studies

NIMROD Cycle 6 (4.1.65.-18.1.65.)

<u>Team</u>	<u>Beam</u>	<u>Experiment</u>	
R.H.E.L.	π^+	π^+p Polarization Measurements	Data Collection
Hydrogen Bubble Chamber Collaboration	K1	Study of K^-p Interactions	Setting up
A.E.R.E./Southampton U./U.C.L.	P3	Study of $\pi^- + p \rightarrow \begin{matrix} (n+x) \\ (p+x) \end{matrix}$ Processes	Setting up
U.C.L./Bristol U./Cambridge U.	P3X	Study of the η^0 meson	Setting up
U.C.L./Westfield Coll.	π^+	π^+p Differential Cross-Section Measurements	Setting up

Internal Events

Mon., 11 Jan., 11.15 a.m., Lecture Theatre	Nimrod Lecture Series	Dr. E.L. Hart (Brookhaven and Univ. of Pisa)	Ω^- and other Resonances in K-p Interactions
Mon., 18 Jan., 11.15 a.m., Lecture Theatre	Nimrod Lecture Series	Prof. J.W. Keuffel (Univ. of Utah)	Progress Report on the Utah 2000-ton Neutrino Detector

External Events

Tues., 12 Jan., 2.30 p.m., Clarendon Lab., Oxford	Theor. Phys Seminar	Dr. C.W. Wong (Copenhagen)	Some Applications of the Brueckner-Bethe-Goldstone Theory to Nuclear Problems
Wed., 13 Jan., 7 p.m., S.E.B. George St. Oxford	I.E.E. District Meeting	Mr. L.R.F. Harris (G.P.O. Eng. Dept. London)	Modern Telephone Developments with Particular Reference to Electronic Techniques

Wed., 17 Feb., 6 p.m., "The 1965 Faraday Lecture, Colour Television" by F.C. McLean, Director of Engineering, B.B.C. at Central Hall, Westminster. Applications for tickets accompanied by S.A.E. to the Secretary, Inst. of Electrical Engineers, Savoy Place, London, W.C.2.

A.E.R.E.

Tues., 12 Jan., 2 p.m., Conf. Rm. Bldg. 8.9	Theor. Phys Seminar	Mr. M. Powell	Least Squares Fitting
Wed., 13 Jan., 2.30 p.m.		Film	"Dragon"
Thurs., 14 Jan., 11.30 a.m.			(50 mins.)

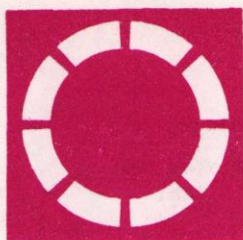
Cockcroft Hall (Inner gate manned, outer gate open).

Social News

RECORD PROGRAMME The second programme of the New Year will include William Walton's Overture, "Portsmouth Point", music from "The Gondoliers" by Sullivan and will end with Offenbach's "Gaité Parisienne". The programme will be given in the Lecture Theatre at 12.30 p.m. on Tuesday, 12 January. All are invited to come along.

CHRISTIAN FELLOWSHIP GROUP The Group meets on the second and fourth Wednesday of each month in the P.L.A. Conference Room, Building R.12, 1.00-1.30 p.m. The next meeting will be on 13 January, when Mr. Peter Jones of the Nimrod Machine Physics Group will lead Bible Study on the First Epistle of John, Chap. 2, v.29 to Chap. 3, v.10. Further details from B.E. Kingdon, R.20, Ext 6297.

HOUSE BUILDERS, ETC. Double Glazing Exhibition, at the Piccadilly Hotel, London, 19-20 Jan.



Rutherford Laboratory Bulletin

No. 2/65
18 Jan 65

General News

VISITORS. The following parties will visit the Laboratory on the dates indicated:

Thirty members of the Brighton College of Technology Physical Society on Wednesday, 20 January.

Five Experimental Officers from Daresbury Nuclear Physics Laboratory on Thursday, 21 January.

Ten undergraduates from Oxford University, on Friday, 22 January.

Thirty-six pupils from Millbrook House School, Milton, Abingdon, on Saturday 23 January.

INTEGRATED CIRCUIT SEMINAR. A seminar on integrated circuits, given by Texas Instruments Ltd., will be held in the Lecture Theatre on Thursday, 21 January. The seminar will begin at 10.30 a.m. and will last throughout the day until 5.00 p.m. (Lunch 12.00 noon to 1.30 p.m.).

Could people, who expect to attend this seminar, please inform H.F. Norris, Building R.20, Ext 484, before Tuesday, 19 January, from whom programmes may be obtained.

GROUP TRAVEL TO U.S.A. An option has been secured on an Aër Lingus Boeing jet for a flight to New York leaving London Airport at 1300 hours on the 21 July and return to London on 16 August. The fare would be £73 to include insurance, the cost of transportation to and from London Airport, the departure charge and other incidentals.

Payment must be made before the end of January. Full details and application forms are available from Mrs. M.C. Gould, Personnel Branch, Building R.20, Ext 575.

MISSING EQUIPMENT. A BANDA duplicating machine, Ser. No. 2723, was removed from the print room, Building R.2, on Thursday evening, 7 January. Will anyone who has information concerning its whereabouts, please contact Mr. P.B. Nichols, Nimrod Admin. Office, Building R.2, Ext 6615.

During the first two weeks of December, 1964, a Scintilla Saw, number 2057, was removed from a bench in Lab 7, Building R.1. Anyone with information on its present whereabouts are asked to contact Mr. D.H. Trew on Ext 252/394.

FOUND Seven Polaroid photographs of oscilloscope traces. These were found in a Hillman Husky, Reg. No. 615 N.F.C., first thing on Monday morning, 11 January. The owner should apply to Scientific Administration, Building R.20.

Machine Schedules

P.L.A.

<u>Date</u>	<u>Team</u>	<u>Experiment</u>
18-20 Jan.	Maintenance	
21-24 Jan.	Oxford Univ.	$C^{12}(p,d)C^{11}$ Reaction Studies

Internal Events

Mon., 18 Jan., 11.15 a.m., Lecture Theatre	Nimrod Lecture Series	Prof. J.W. Keuffel (Univ. of Utah)	Progress Report on the Utah 2000-ton Neutrino Detector.
Tues., 19 Jan., 3.30 p.m., Lecture Theatre	Nimrod Proposals for Experiments	Dr. D.M. Binnie (Imp. Coll).	A Search for the two- electron Decay of the ϕ_0 -particle.
Mon., 25 Jan., 11.15 a.m., Lecture Theatre	Nimrod Lecture Series	Prof. J. Blatt (Univ. of New South Wales)	Does the Electron have a Finite Size?
Tues., 26 Jan., 11.00 a.m., Lecture Theatre	Special Lecture	Dr. M. Derrick (Argonne National Lab).	An Informal Talk on Recent Work done at Argonne.

External Events

Fri., 22 Jan., 4.15 p.m. Clarendon Lab., Oxford.	Clarendon Lab. Colloq.	Dr. A.B. Clegg (Dept. of Nuclear Physics, Oxford)	Studies of Nuclear Structure with Inter- mediate Energy Nuclear Reactions
Mon., 25 Jan., 2.30 & 5.30 p.m., Savoy Place, W.C.2.	I.E.E. Electronics Div.	Second Colloquium on "Logic Circuits".	
Tues., 26 Jan., 3 p.m., Savoy Place, W.C.2.	I.E.E. Electronics Div.	Colloquium on "The Achievement and Maintenance of High Accuracy in Analogue-to-Digital Conversion.	
Tues., 26 Jan., 5.30 p.m., Savoy Place, W.C.2.	I.E.E. Lecture	Prof. N.J. Felici, Dr. es. Sc.	Electrostatic Generators

Social News

COMPULSORY TRANSFER OF ALL N.I.R.N.S. STAFF TO S.R.C. A general meeting for members of all Staff Associations is being held by the Staff Alliance in the Lecture Theatre at 1.00 p.m. on Friday 22 January. The purpose of this meeting is to allow Mr. A. Spurway, Chairman of N.I.R.N.S. Staff Side, to report on the course of negotiations on the future conditions of service in the Science Research Council. This subject will be of importance to everyone and Staff are urged to make a special effort to attend. Entrance is by membership card only.

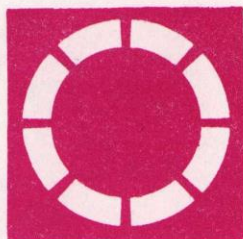
RECORD PROGRAMME. The programme for Tuesday, 19 January is devoted entirely to Duke Ellington, spanning 30 years of this very talented composer's work. The time and place, 12.30 p.m. in the Lecture Theatre.

HOLIDAYS 1965. "International Holiday and Travel Exhibition," at Olympia, London, 20-30 January.

MOTORING. "International Racing Car Show", also at Olympia 22-30 January. As the title may be misleading to the uninitiated, this show is of interest to all motorists who may be considering how to improve the performance of their standard car.

Rutherford Laboratory
15 January, 1965

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



Rutherford Laboratory Bulletin

No. 3/65
25 Jan 65

General News

OVERSEAS VISITS The Director to visit C.E.R.N., Geneva, on 25 January to attend a meeting of the European Advisory Committee.

Dr. T.G. Walker, to New York on 26 January for one week, to attend a meeting of the American Physical Society and to visit the Brookhaven National Laboratory.

CONFERENCES. The Ninth International Conference on "Cosmic Rays" will be held in the Physics Department of the Imperial College of Science & Technology, South Kensington, London from 6-17 September, 1965. Preliminary details are available from H.F. Norris, Scientific Administration, Building R.20, Ext 484. Further information will be published in the Bulletin when available.

25 Feb - 10 March: 4th International University Seminar on Nuclear Physics. Topic - Quantum Electrodynamics. To be held at Schladming, Styria, Austria.

10-12 March: Particle Accelerator Conference, at Washington, D.C., U.S.A.

MISSING EQUIPMENT. The following items of equipment have been reported missing:-

Avometer, Model 8, Ser. No. 36881-C-855
" " " " " 42274-C-1255

Will anyone with information on the whereabouts of these items please inform Mr. F. Harden, Building R.1, Ext 6114.

EXTERNAL COURSES. The following course will be held at the Enfield College of Technology, Queensway, Enfield during the Spring Term 1965:-

"Cryogenics - Low Temperature Engineering", six evening lectures commencing 18 February, 6.00 - 8.00 p.m.

The fee for this course is £1. Further details may be obtained from Mrs. M.C. Gould, Personnel Branch, Building R.20, Ext 575.

The following two day course is being held at the Department of Science, Slough College, Bucks:-

"Properties and Industrial Applications of the Newer Metals", on 17 and 18 February commencing 9.30 a.m. each morning. The course fee is £4. Further details may be obtained from Mrs. M.C. Gould, Personnel Branch, Building R.20, Ext 575.

INSURANCE BROKERS. Donald Macintosh (Insurance) Ltd., would like to remind staff that their representative attends in the Welfare Office, Building R.16 every Friday from 12.30 p.m. to 2.30 p.m. (Tel Ext 299 between these hours, Ext 262 for appointments at other times). They may also be contacted in Building 303, A.E.R.E every Friday, during usual working hours. (Ext 72-2100).

GROUP TRAVEL TO U.S.A. Tickets are still available. For details see Bulletin No. 2/65.

Machine Schedules

P.L.A.

<u>Date</u>	<u>Team</u>	<u>Experiment</u>
25-28 Jan	Birmingham Univ.	Polarization Studies
29 Jan-3 Feb	R.H.E.L. and Queen Mary College	Measurement of the Polarization of Neutrons from the D(p,n) 2p Reaction at 50 MeV.

NIMROD Cycle 7 (25.1.65. - 8.2.65.)

<u>Team</u>	<u>Beam</u>	<u>Experiment</u>	
Imperial Coll./ Manchester Univ.	K2	Study of the $\omega^0 \rightarrow e^+ + e^-$ decay	Data Collection
R.H.E.L./Oxford Univ.	π^+	π^+p Polarization Measurements	Data Collection
Hydrogen Bubble Chamber Collaboration	K1	Study of K^-p Interactions	Setting up/ Data Collection

Internal Events

Mon., 25 Jan., 11.15 a.m., Lecture Theatre.	Nimrod Lecture Series	Prof. J. Blatt (Univ. of New South Wales)	Does the Electron have a Finite Size?
Tues., 26 Jan., 11.00 a.m., Lecture Theatre.	Special Lecture	Dr. M. Derrick (Argonne National Lab)	An Informal Talk on Recent Work done at Argonne.
Tues., 26 Jan., 3.30 p.m., Lecture Theatre	Nimrod Proposals for Experiments	Dr. K.F. Chackett (Birmingham Univ.)	A Proposal for Nuclear Chemistry Experiments using Nimrod.
Mon., 1 Feb., 11.15 a.m., Lecture Theatre.	Nimrod Lecture Series	Dr. R.S. Gilmore (R.H.E.L.)	Elastic p-p, π^-p , k-p and $\bar{p}p$ Scattering in the Momentum Transfer range 0.0005 to 1 (GeV/c) ² .

External Events

Wed., 27 Jan., 2.30 p.m., Brunel Coll., Acton, W.3	Electronics Colloq.	P.E. Gibbons (A.E.R.E.)	Opto-Electronic Devices
Wed., 27 Jan., 4.30 p.m., Brunel Coll., Acton, W.3	Vacuum Study Group	D. Baker (P.O. Research Dept., Dollis Hill)	Leak Detection in Transistor Capsules. Application of Leak Detection Apparatus.
Wed., 27 Jan., 5.30 p.m., Phys. Theatre, Imp. Coll.	Inst. of Maths. Lecture.	Prof. E.C. Zeeman	A Mathematical Model of the Brain.
Thues., 28 Jan., 4.15 p.m., Univ. of Southampton.	Physics Colloq.	Dr. R.J. Reid (Univ. of Leeds)	Extensive Air Showers having Primary Energy $> 10^{17}$ eV.

A.E.R.E.

Tues., 26 Jan.,
2 p.m., Conf. Rm.,
Bldg. 8.9.

Theor
Phys.
Seminar

Prof. J.M. Blatt
(Univ. of New
South Wales)

Pairing Wave Functions
for Finite Systems.

Social News

RECORD PROGRAMME. The programme for Tuesday, 26 January will open with the "Rienzi Overture" by Wagner, followed by several Operatic Arias sung by Beniamino Gigli and will conclude with Rossini Overture, "The Silken Ladder". For the benefit of people who only attended the first few programmes, please note that the reproduction of records has been greatly improved. All are welcome to the next session, which as usual is at 12.30 p.m. in the Lecture Theatre.

CHRISTIAN FELLOWSHIP GROUP The next meeting of the Group will be on Wednesday, 27 January, 1-1.30 p.m. in the P.L.A. Conf. Rm., R.12, when the Rev. M. Reddaway of Henley Baptist Church will talk on "Jesus Christ - His Divinity." All are welcome. Further details from B.E. Kingdon, R.20, Ext 6297.

Rutherford Laboratory
22 January 1965

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