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RUTHERFORD LABORATORY BULLETIN NO.50

for the week commencing Monday, 30th October, 1961

EUROPEAN ACCELERATOR STUDY GROUP

✓ A meeting of the European Accelerator Study Group will be held on Monday and Tuesday, 30th and 31st October, at The Coseners House, Abingdon. The Group consists of representatives from the various high energy laboratories in Europe, who meet periodically to discuss new developments in high energy accelerators and associated techniques. Members of the Group will visit the Laboratory on Wednesday, 1st November, 1961.

USE OF RESINS

✓ Sometime ago it became necessary for the Vacuum Group to set up a Resin Laboratory to investigate problems associated with the Nimrod vacuum vessels. In the past few years considerable experience in potting, laminating and formulating for various purposes has been gained. This information is freely available and any Group wishing to make use of this service should contact Mr. A. W. Kirk, Laboratory 3, Building R.1, Extension 36.

INTERNAL EVENTS

Mon., 30th Oct., 11 a.m., Conf. Rm., Building R.1	Nimrod Lecture Series	Dr. P. T. Matthews (Imperial College, London)	"The Aix-en- Provence Conference" (Theory)
X Friday, 3rd Nov., 2.15 p.m. Conf. Rm., Building R.1	Nimrod Lecture Series	Prof. A. Salam (Imperial College)	Hyperon Resonances
Mon., 6th Nov., 11 a.m., Conf. Rm., Building R.1	Nimrod Lecture Series	Dr. P. J. Duke	"Proton-Proton Scattering between 1 and 3 GeV.

EXTERNAL EVENTS

31st October - 1st November, "Engineering with Plastics" (Plastics Institute) to be held at I.E.E., Savoy Place, London, W.C.2.

X Tues. 7th Nov., 3.30 p.m. Cockcroft Hall, A.E.R.E.	Harwell Lecture	Dr. T.G. Pickavance	The Work of the Rutherford Laboratory.
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8th-10th November, at Savoy Place, London, W.C.2. : I.E.E. Conference on Non-Destructive Testing in Electrical Engineering."

Thurs., 2nd Nov., 4.30 p.m., University College, London.	Theoretical Physics Seminar	Dr. M.J. Seaton (U.C.L.)	"Impact Parameter Treatment of Electron-Atom Collisions"
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G. L. Cooper

Scientific Administration

30th October, 1961.

MSG.



# RUTHERFORD LABORATORY BULLETIN

No.51, for the week commencing Monday, 13th November, 1961.

## VISITORS

✓ The Rt. Hon. Edward Heath, Lord Privy Seal, will visit the Rutherford Laboratory on Monday, 13th November, where he will be received by the Assistant Director, Mr. L. B. Mullett.

✓ A party of 30 members from the School of Military Survey, Hermitage, the Royal Military College of Science, Shrivenham, and Ordnance Survey, Chessington, visited the Laboratory on Thursday, 9th November.

## VISITS ABROAD

✓ Dr. P. G. Murphy of the Nimrod Nuclear Physics Group left for C.E.R.N., Geneva, on 12th November for discussions on a proposed experiment with the C.E.R.N. proton synchrotron, using spark chambers. He will return on 19th November.

✓ Mr. J. D. Lawson of the Accelerator Research Group will accompany Dr. F. A. Vick, Director A.E.R.E., on a visit to C.E.N., Saclay, France, commencing 14th November, to assist in discussions on cyclotrons. He will also visit the Joliot-Curie Laboratory at Orsay before returning on 19th November.

## SAFETY SUGGESTIONS AWARD

✓ The following award was made at a meeting of the Rutherford Laboratory Safety Suggestions Award Committee on 30th October:-

Mr. E. I. Marnier, Building R.9 - £1. 10s. Od.

## VACANCIES AT C.E.R.N.

A further list of vacancies at C.E.R.N., Geneva, has been received, and details may be obtained from the Personnel Section, Room 68, Building R.20. Posts for physicists, engineers, mathematicians and administrative staff are included.

## INTERNAL EVENTS

✓ Mon. 13th Nov., 11 a.m., Conf. Rm., Building R.1	Nimrod Lecture Series	Mr. N. M. King	"Theory of Separated Beams"
Mon., 20th Nov., 11 a.m., Conf. Rm., Building R.1	Nimrod Lecture Series	Dr. D. Radojičić (Clarendon Laboratory, Oxford.)	"Anti-proton Annihilation"

## EXTERNAL EVENTS

✓ 13th-17th, 22nd and 23rd November at 12 noon, and 1 p.m. each day, Cockcroft Hall, A.E.R.E.: U.K.A.E.A. Film Magazine No.2 (Second Year) and film on Nuclear Power Reactors. (No tickets required).

13th-17th November, at the Mayfairia Rooms, Bryanston Street, London, W.1: Exhibition of Precision Measuring Equipment by the Société Genevoise Limited and Messrs. Taylor, Taylor and Hobson.

13th-18th November, at Earls Court, London: 2nd Engineering Materials and Design Exhibition. (See note overleaf)

EXTERNAL EVENTS / continued overleaf



# RUTHERFORD LABORATORY BULLETIN

No. 52, for the week commencing Monday, 20th November, 1961

## ATLAS COMPUTER LABORATORY

Dr. J. Howlett of the Theoretical Physics Division, A.E.R.E., has been appointed Head of the new N.I.R.N.S. Atlas Computer Laboratory. The appointment is effective from 1st December, 1961.

Details of the N.I.R.N.S. Atlas Computer were announced in August. The Laboratory housing the Computer will be built on the north side of the Rutherford Laboratory.

## VISITORS

Mr. I. D. Scott, British Ambassador Designate to the Sudan, visited the Rutherford Laboratory on Thursday, 16th November.

## NIMROD POWER SUPPLIES

The two large transformers which were delivered to the Laboratory within the past week form part of the Nimrod magnet power supply primary ripple filter. The transformers, which measure approximately 14ft x 8ft x 13ft high and weigh 58 tons each, have been manufactured by Associated Electrical Industries Ltd. at their Wythenshawe works. They will be installed in the Converter Building, R.4.

## INTERNAL EVENTS

Tues., 21st Nov., 2.15 p.m., Conf. Rm., Building R.1	Nimrod Lecture Series	Dr. B. Maglić (Berkeley and Belgrade)	Evidence for $2\pi$ and $3\pi$ Resonances in Anti-Proton Annihilations.
Mon., 27th Nov., 11 a.m., Conf. Rm., Building R.1	Nimrod Lecture Series	Professor J. Hamilton, (University College, London)	Application of Dispersion Relations to Pion-Nucleon Scattering.

## EXTERNAL EVENTS

20th - 22nd Nov., at Messrs. Rockwell's Showrooms, Welsh Harp, Edgware Road, London, N.W.2: Exhibition of Machine Tools. (Details available).

Tues., 21st Nov., 5.30 p.m., Great George Street, London, S.W.1.	Institution of Civil Engineers Lecture	Mr. S. A. Rossiter (Merz and McLellan) Mr. J. S. Brown (U.K.A.E.A.)	The Main Building for the 7 GeV Proton Synchrotron at Harwell.
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(Tickets may be obtained from B. E. Kingdon, Building R.20, Extension 3196/66).

Wed. and Thurs., 22nd and 23rd Nov., at 12 noon and 1 p.m. each day, Cockcroft Hall, A.E.R.E.: U.K.A.E.A. Film Magazine No. 2 (Second Year) and film on Nuclear Power Reactors. (No tickets or passes required).

Wed., 22nd Nov., 2 p.m., Conf. Rm., Bldg. 8.9, A.E.R.E.	Theoretical Physics Seminar	Dr. J. M. Soper	Isobaric Correspondence in Nuclei.
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Wed., 22nd Nov., 6 p.m., at the London School of Hygiene and Tropical Medicine, Gower Street, W.C.1: Brit. I.R.E. Computer Group Symposium on "Adaptive Optimizing Control". (Non-members should apply to the Secretary, Brit. I.R.E., 9 Bedford Square, London, W.C.1).

Thurs., 23rd Nov., 9 a.m., Bldg. 351.15, A.E.R.E.	Chem. Eng. Division Colloquium	Mr. J. E. Bown	Engineering Support to the Scientific Divisions at Harwell.
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Thurs., 23rd Nov., 3.30 p.m., Wantage Radiation Lab.	Isotope Research Div. Talk	Mr. R. W. Clarke	The Rad: Is it Practical?
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Mon., 27th Nov.,  
4.45 p.m., Bristol  
University.

Physics  
Department  
Colloquium

Dr. H. Muirhead  
(Liverpool  
University).

Muon Capture.

6th December, at Wolverhampton College of Technology: Brit. I.R.E. Symposium on  
"New Electronic Techniques in Non-Destructive Testing". (Details may be obtained from  
B. E. Kingdon).

B. E. Kingdon  
Scientific Administration

20th November, 1961.



# RUTHERFORD LABORATORY BULLETIN

No.53, for the week commencing Monday, 27th November, 1961.

## HELIUM BUBBLE CHAMBER

An Oxford University proposal to the National Institute to build a large helium bubble chamber has received financial approval from the Treasury. The project will be a joint responsibility between Oxford University and the Rutherford Laboratory, and construction of the chamber will be carried out here in preparation for its use in important experiments with NIMROD. The chamber itself will be 80 cm. long and 40 cm. x 30 cm. cross section, and over this volume a magnetic field of 15 kg. will be supplied by a 120 ton electromagnet. Housing for the complete installation will be provided in an extension to the Experimental Area.

## NIMROD POWER SUPPLIES

During the past fortnight the first motor-alternator-flywheel set to be installed (there are eventually to be two) has been in operation for the first time. The total running time so far has been about 60 hours. The degree of shaft vibration, both with the alternator unexcited and excited, has been much lower than that experienced during similar runs on the English Electric Company's test-bed at Stafford. It is hoped to begin using this alternator soon to commission the converter equipment and to supply power for the first tests on the magnet.

## VISITS ABROAD

Mr. G. E. Simmonds, Mr. P. D. Hey and Mr. B. F. Colyer of the Engineering Design Group will visit C.E.R.N., Geneva, for four days commencing 26th November, to discuss nuclear physics research equipment for proton synchrotrons.

Dr. R. G. Moorhouse of the Theoretical Group will leave for C.E.R.N. on 27th November to discuss high energy physics, particularly K-meson experiments. He will also visit Rome University and the Frascati Laboratory to study work on the photo-production of pions and quantum electrodynamics before returning on 1st December.

Mr. N. M. King of the Theoretical Group and Mr. E. J. N. Wilson of the Nimrod Magnet Group will visit C.E.R.N. on 27th-28th November for discussions on beam handling problems. They will also visit D.E.S.Y., Hamburg, to study analogue computer application to beam design, before returning on 2nd December.

## NUCLEAR PHYSICS SYMPOSIUM

The Institute of Physics and The Physical Society announces a symposium on "High Energy Nuclear Physics", to be held in the Physics Department of the Imperial College of Science and Technology on 26th-27th March, 1962. Several review lectures on both theoretical and experimental topics will be given. Those who wish to contribute should send abstracts to Professor C. C. Butler, Physics Department, Imperial College, London, S.W.7, by January 1st, 1962. Further details may be obtained from the Administration Assistant of the Institute and Society, during December 1961.

## CONSULTANT

Dr. P. T. Matthews, a consultant to the Institute, has been appointed Professor of Theoretical Physics at the Imperial College of Science and Technology.

## INTERNAL EVENTS

Mon., 27th Nov., 11 a.m., Conf. Rm., Building R.1	Nimrod Lecture Series	Professor J. Hamilton (University College, London).	Application of Dispersion Relations to Pion-Nucleon Scattering.
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INTERNAL EVENTS (continued  
overleaf) ...



INTERNAL EVENTS (contd.)

Mon., 4th Dec., 11 a.m. Conf. Rm., Building R.1	Nimrod Lecture Series	Mr. A.J. Egginton	Nimrod Nuclear Equipment.
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EXTERNAL EVENTS

Mon., 27th Nov., 4.45 p.m., Bristol University.	Physics Department Colloquium	Dr. H.Muirhead (Liverpool University)	Muon Capture.
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Tues., 28th Nov., 6.15 p.m., Farnborough Technical College.	I.E.E. Meeting	Messrs. F. C. Williams, E.R. Laithwaite, J.F. Eastham and W. Farrer.	Brushless Variable-Speed Induction Motors using Phase- Shift control.
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Tues., 28th Nov., 7 p.m., Farnborough Technical College. (Non-members should apply to Mr. F. E. Parr, 42 Carmarthen Avenue, East Cosham, Hants.)	Brit.I.R.E. Meeting	Mr. K.L. Smith	Data Acquisition Systems.
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Wed., 29th Nov., 2 p.m., Conf. Rm., Building 8.9, A.E.R.E.	Theoretical Physics Seminar	Dr. R.E. Howard	Hydrogenic Atoms in a Strong Magnetic Field.
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Wed., 29th Nov., 5.30 p.m., Savoy Place, London, W.C.2.	I.E.E. Lecture	Mr.E. Wolfendale	Recent Develop- ments in Semi- conductor Devices and their Applications.
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30th November-1st December: I.E.E. Symposium on Nuclear Electronics (in conjunction with the British Nuclear Energy Conference). 5.30 p.m. each day at Savoy Place, London, W.C.2.

Fri., 1st Dec., 9-10 a.m., Training Centre, Building 328/T, A.E.R.E.	Administration Division Colloquium	Mr. W.E. Johnson	Document Reproduc- tion Services at Harwell.
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Fri., 1st Dec., 4.15 p.m., Clarendon Lab., Oxford.	Theor. Nuclear Physics Colloquium	Professor H. Frölich (Liverpool University)	The Structure of Momentum Space, The Neutrino and the Pauli Principle.
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6th December: Brit.I.R.E. Symposium on "New Electronic Techniques in Non-Destructive Testing" at Wolverhampton College of Technology. (Details may be obtained from B. E. Kingdon).

B. E. Kingdon

Scientific Administration

24th November, 1961.

MSG.



# RUTHERFORD LABORATORY BULLETIN

No. 54, for the week commencing Monday, 4th December, 1961

## VISITORS

✓ Mr. Lewis Jones, U.S. Minister in London, visited the Laboratory on Monday, 27th November.

## VACANCIES AT C.E.R.N.

Further vacancy notices (Nos. 23 to 41 inclusive) have been received from C.E.R.N., Geneva. Posts for mechanical, electrical and civil engineers, surveyors, physicists, laboratory technicians and administrative grades are included. Details may be obtained from the Personnel Section, Room 68, Building R.20.

## INTERNAL EVENTS

Mon., 4th Dec., 11 a.m., Conf. Rm., Building R.1	Nimrod Lecture Series	Mr. A. J. Egginton	Nimrod Nuclear Equipment.
Mon., 11th Dec., 11 a.m., Conf. Rm., Building R.1	Nimrod Lecture Series	Dr. R. J. Eden (Cambridge University)	Objectives and Assumptions in the Structure Analysis of the Strong Inter- actions of Elementary Particles.

(Last lecture in the present series)

## EXTERNAL EVENTS

Mon., 4th Dec., 5.30 p.m., Savoy Place, London W.C.2	I. E. E. Meeting	Discussion	Backward Waves in Wave Guides.
Mon., 4th Dec., 5.45 p.m. Reactor School, A.E.R.E.	A.S.E.E. Lecture	Staff of L.D.C. Electronics Ltd.	Electronic Control in Industry.
Tues., 5th Dec., 5.30 p.m. Savoy Place, London W.C.2	I.E.E. Meas. & Control Meeting	Prof. L. F. Bates, F.R.S. (Nottingham University)	Domains and Domain Patterns.
Wed., 6th Dec: "Nature of Plastics". Demonstration by Bakelite Ltd., 11 a.m. - 5 p.m., Games Room, Social Club. A.E.R.E.			
Wed., 6th Dec., 2 p.m. Conf. Rm., Bldg. 8.9, A.E.R.E.	Theoretical Physics Seminar	Dr. R. J. N. Phillips	Neutron-Neutron Scattering.
Wed., 6th Dec., 6.45 p.m. Leicester University	Brit. I.R.E. Meeting	Mr. P. James	Transistors in Computers and Control Equipment.

(Non-members should apply to Mr. W. J. Stevenson, 77 Beacon Road, Loughborough, Leics.)

B. E. Kingdon  
Scientific Administration

1st December, 1961



# RUTHERFORD LABORATORY BULLETIN

No. 55, for the week commencing Monday, 11th December, 1961

## ELECTRONICS GROUP

Mr. P. Wilde of the Nimrod R.F. Group has been appointed head of the Rutherford Laboratory Electronics Group. He will be generally responsible for liaison with the Electronics Division, A.E.R.E. In addition, within the Laboratory, his group will be responsible for: (a) the development of special items of electronic equipment which are needed for nuclear research, (b) the small scale production of these items, (c) the supply and maintenance of nuclear electronic equipment in the Laboratory.

## NIMROD MAGNET

The first of eight pairs of pole-face windings for Nimrod were delivered to the Laboratory on Tuesday, 5th December. The windings, which will be used for final adjustment of the Nimrod magnetic field shape, are being manufactured by Marston Excelsior Limited of Wolverhampton.

## VISITORS

A party of post-graduate students from the Clarendon Laboratory, Oxford, will visit the Rutherford Laboratory on Tuesday, 12th December.

## INTERNAL EVENTS

Thurs., 14th Dec., 2.15., Conf. Rm., Building R.1.	Nuclear Physics Lecture	Dr. L. W. Jones (Berkeley and C.E.R.N.)	Pion-Nucleon Scattering Experiments with Fast Chambers
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(Summary of scintillation and spark chamber experiments at Berkeley.)

## EXTERNAL EVENTS

Wed., 13th Dec., 11 a.m., 47 Belgrave Square, London, S.W.1.	Inst. Physics & Phys. Soc. Meeting	(I.P.P.S. Low Temperature Group)	Ferromagnetism and Anti-ferro- magnetism.
Wed., 13th Dec., 2 p.m., Conf. Rm., Bldg. 8.9, A.E.R.E.	Theoretical Physics Seminar	Mr. J. E. Hailstone	The I.B.M. 1401 Computer and other Ancillary Equipment
Wed., 13th Dec., 6.30 p.m., 26 Portland Place, London, W.1.	Society of Instrument Technology Meeting	Mr. P. K. McPherson	Application of Complex Plane Methods to System Design
Wed., 13th Dec., 8.30 p.m., Clarendon Laboratory, Oxford.	Lecture	Dr. P. Fisher	Nuclear Seismology

B. E. KINGDON  
Scientific Administration

12th December, 1961



# RUTHERFORD LABORATORY BULLETIN

No. 56, for the fortnight commencing Monday, 18th December, 1961

## NUCLEAR PHYSICS SYMPOSIUM

✓ Intending contributors to the symposium on "High Energy Nuclear Physics" to be held by the Institute of Physics and the Physical Society on 26th-27th March, 1962, are reminded that abstracts of papers should be sent to Professor C.C. Butler, Physics Department, Imperial College, London, S.W.7., by January 1st, 1962. Further details may be obtained from the Administration Assistant of the Institute and Society.

## EXTERNAL COURSE

✓ A course of fifteen lectures on "Nuclear Particle Techniques" will be held at the Borough Polytechnic, Borough Road, London, S.E.1., on Wednesdays at 7 p.m. commencing 17th January, 1962. The fee is fifty shillings. Details are displayed on the Library notice-board, Building R.1.

## LIBRARY NOTICE

✓ A copy of "Principles of Engineering Heat Transfer" by W.H. Giedt, borrowed from the A.E.R.E. Library on 23rd November, is missing. Any information regarding this book should be passed to Mrs. J. McWilliam, Building R.1., Exten. 3196/81.

## EXTERNAL EVENTS

Tues., 19th Dec., 5.30 p.m., Savoy Place, London, W.C.2.	I.E.E. Meeting	Mr. K.G. King	The Use of Controllable Semiconductor Rectifiers in Machine Control.
X Thurs. 28th Dec., 7 p.m., James Watt Institute, Birmingham.	Plastics Institute Lecture	Mr. H.R. Everard	Survey of New Developments in Resin.

Wed., 3rd Jan., 1962: Brit. I.R.E. Symposium on "Data Transmission".  
(All day meeting, commencing 10 a.m., at Keppel Street, London, W.C.1.  
Application should be made to the Secretary, 9 Bedford Square, London, W.C.1.).

Fri., 5th Jan., 1962: I.P.P.S. Symposium on "Some Aspects of Vacuum Science and  
Technology". To be held in London. (Further details may be obtained from the  
Institute of Physics, 47 Belgrave Square, London, W.C.1.).

B.E. KINGDON  
Scientific Administration

19th December, 1961.



# RUTHERFORD LABORATORY BULLETIN

No. 57, for the week commencing Monday, 15th January, 1962.

## VISITORS

✓ A party of 12 South African students, touring under the auspices of the Abe Bailey Bursary Trust, will visit the Laboratory on Friday, 19th January.

## VISITS ABROAD

✓ Dr. P. G. Murphy of the Nimrod Nuclear Physics Group left for C.E.R.N., Geneva, on 8th January, where he will spend approximately one month participating in an experiment on the C.E.R.N. proton synchrotron.

✓ Dr. P. J. Duke of the Nimrod Nuclear Physics Group will visit C.E.R.N. from 16th-22nd January, to discuss an experiment using the C.E.R.N. synchro-cyclotron.

✓ Dr. A. M. Segar of the Nimrod Nuclear Physics Group is expected to return in mid-February from C.E.R.N., where he is completing an experiment on K-meson interactions using the C.E.R.N. proton synchrotron.

✓ Mr. M. Snowden and Dr. R. H. Thomas of the Bubble Chamber Group will visit France on 16th-19th January, to attend the Conference on "Radiation Protection for High Energy Accelerators" at Orsay and Saclay.

## NIMROD VACUUM VESSEL

✓ The prototype section of the inner vacuum vessel for Nimrod which arrived at the Laboratory on 12th December from the manufacturers, Marston Excelsior Limited of Wolverhampton, has been set up in the Vacuum Vessel Testing Compound in the Nimrod Experimental Area. The section is approximately 54 ft. long by 4 ft. x 1 ft. Pumping down tests commenced on Monday, 8th January.

## MISSING BOOK

✓ An A.A. Gazetteer is missing from the Claims Department, Room 76, Building R.20. Any information regarding this should be sent to Mr. J. Sissons, Ext. 3196/77.

## EXTERNAL COURSES

✓ Courses of twelve lectures on each of the following subjects have just commenced at the Polytechnic, 309 Regent Street, London, W.1:

- (a) "Semi-conductor Circuit Elements" (on Tuesdays at 7-8.30 p.m.)
- (b) "Experimental Nuclear Spectroscopy" (on Wednesdays at 6.30-8 p.m.)

The fee for each course is one guinea. Further details may be obtained from B. E. Kingdon.

## VACANCIES AT C.E.R.N.

Further vacancy notices (Nos. 51 and 53-58) have been received from C.E.R.N., Geneva. Posts for physicists, engineers, designers and laboratory technicians are included. Details may be obtained from the Personnel Section, Room 68, Building R.20.

## INTERNAL EVENTS

Mon., 15th Jan., 11.15 a.m., Conf. Rm., Building R.1	Nimrod Lecture Series	Mr. D. Bugg (Cambridge University)	Proton-Proton Scattering at 970 MeV.
Mon., 22nd Jan., 11 a.m., Conf. Rm., Building R.1	Nimrod Lecture Series	Dr. G. H. Stafford	Research and Organisation on the P.L.A.

continued ...



EXTERNAL EVENTS

15th-19th January: Institute of Physics and Physical Society's 46th Annual Exhibition, at the Royal Horticultural Society's Halls, Westminster, London. (Tickets are available from B. E. Kingdon, Building R.20, Ext. 3196/66).

Tues, 16th Jan., 2 p.m., Conf. Rm., Building 8.9, A.E.R.E.	Theoretical Physics Seminar	Dr. P.G. de Gennes (Orsay)	Some Aspects of Nuclear Resonance in Ferromagnets.
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Tues., 16th Jan., 6.30 p.m., Conservative Club, South Parade, Leeds 1.	I.E.E. Lecture	Mr. J. P. McBreen	Application of Power Rectifiers and Convertors.
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Wed., 17th January: Demonstration of Endoscopic Optical Systems by Optec Limited, 10.30 a.m.-4 p.m. in the Games Room, Social Club, A.E.R.E.

Wed., 17th Jan., 2.45 p.m., Sports Pavilion, A.W.R.E., Aldermaston.	I.Mech.E. Lecture	Mr. D. E. Mullinger	New Techniques in Vibration Analysis and Simulation.
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Thurs., 18th Jan., 2 p.m., Cockcroft Hall, A.E.R.E.	Culham Laboratory Colloquium	Dr. R. Wilson  (No pass required)	Plasma Spectroscopy.
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Fri., 19th Jan., 7.30 p.m., Institute of Engineers, Park Place, Cardiff.	Institution of Engineering Inspection Meeting	Mr. E.J. Grimwade	Radiography in Engineering.
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Mon., 22nd Jan., 5.30 p.m., Savoy Place, London, W.C.2.	I.E.E. Lecture	Mr. J. C. Bailey and Mr. T. L. Richards	Aluminium or Copper Conductors?
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Mon., 22nd Jan., 6 p.m., 1 Birdcage Walk, London, S.W.1.	I.Mech.E. Meeting	Discussion	Cooling by Air.
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B. E. Kingdon

12th January, 1962.

MSG.



# RUTHERFORD LABORATORY BULLETIN

No. 58, for the week commencing Monday, 22nd January, 1962.

## VISITORS

✓ The Rt. Hon. Edward Heath, Lord Privy Seal, will visit the Laboratory on Monday afternoon, 22nd January, where he will be received by the Director.

✓ A party of 29 physics students from Sir John Cass College, Aldgate, London, visited the Laboratory on Wednesday, 17th January.

## NIMROD MAGNET

✓ It is hoped to commence combined live tests on the main Nimrod magnet and its power supply during this week. These will take several weeks and will be followed by the magnetic survey, which is expected to continue until the end of August. As from Monday, 22nd January, until further notice, access to the Magnet and Injector Rooms will be restricted to authorised personnel. Anyone requiring to enter this area should apply to Mr. R. G. Russell. Similarly, access to the Alternator House and Converter House will be restricted, but in this case application should be made to Mr. H. C. Brooks. It will be appreciated that these restrictions are only applied in the interests of overall safety.

## VISITS ABROAD

✓ Dr. R. H. Thomas of the Bubble Chamber Group left for C.E.R.N., Geneva, and D.E.S.Y., Hamburg, on 20th January for a three-day visit to discuss future shielding experiments.

✓ Mr. K. J. McKee of the Bubble Chamber Group will visit C.E.R.N. for three days commencing 22nd January, to discuss film processing equipment for bubble chamber experiments.

✓ Mr. E. W. Kendall of the Nimrod Injector Group will visit S.A.M.E.S., Grenoble, from 22nd to 25th January, to discuss E.H.T. equipment.

✓ Mr. D. H. Lord of the Bubble Chamber Group will be in the U.S.A. for approximately three weeks, commencing 24th January, where he will visit the Brookhaven National Laboratory, New York, the Massachusetts Institute of Technology, Boston, the National Bureau of Standards, Washington, and the Lawrence Radiation Laboratory, Berkeley, in connection with high speed measuring equipment for bubble chamber photographs.

✓ Dr. W. A. Smith and Dr. P. A. Chatterton of the Nimrod Magnet Group will visit C.E.R.N. and S.A.M.E.S. from 29th January to 2nd February, for discussions on particle separators and H.T. sets respectively.

## P.L.A.

✓ The P.L.A., which has been fully operational at 50 MeV since 1st January, is now being used on a 24-hour basis. The following is the programme scheduled for the current week:-

<u>Date</u>	<u>Team</u>	<u>Experiment</u>
X 22nd-25th January	A.E.R.E.	Time of Flight survey (A (p-d) B).
25th January	Clarendon Laboratory, Oxford.	Radiation Chemistry.

## INTERNAL EVENTS

X Mon., 29th Jan., 11 a.m., Conf. Rm., Building R.1	Nimrod Lecture Series	Dr. J. Mulvey (Clarendon Laboratory)	Some Experiments on Elementary Particle Research at Oxford.
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EXTERNAL EVENTS / ...



EXTERNAL EVENTS

Tues., 23rd Jan., 5 p.m., Savoy Place, London, W.C.2.	Inst. Post Office Elec. Engrs. Lecture	Mr. R. J. Feasey	Failure of Metals.
Tues., 23rd Jan., 5.30 p.m., Savoy Place, London, W.C.2.	I.E.E. Lecture	Mr. P. F. Gunning	Power Supply Control Systems.
Wed., 24th Jan., 2 p.m., Conf. Rm., Building 8.9, A.E.R.E.	Theoretical Physics Seminar	Dr. J. H. Tait	Scattering of Slow Electrons by Hydrogen Atoms.
Wed., 24th Jan., 5.30 p.m., Savoy Place, London, W.C.2.	I.E.E. Lecture	Mr. H. Edels	Arc Theory and Circuit Breaking.
X Thurs., 25th Jan., 7 p.m., College of Science and Tech- nology, Bristol.	Inst. Physics & Phys. Soc. Meeting	Mr. R. S. Sharpe (A.E.R.E.)	Recent Develop- ments in Non- destructive Testing.
Fri., 26th Jan., 9 a.m., Building 328/T, A.E.R.E.	Administration Division Colloquium	Mr. V. T. Morgan	Contracts.
Fri., 26th Jan., 7 p.m., James Watt Institute, Birmingham.	Plastics Institute Lecture	Mr. J. H. Davis	Reinforcements other than Glass.
Tues., 30th Jan., 7 p.m., Technical Coll., Farnborough.	Brit.I.R.E. Lecture	Mr. D. Harrison	Transistors in Nuclear Instrumentation.

(Non-members wishing to attend should contact B. E. Kingdon, Ext. 3196/66).

B. E. Kingdon

22nd January, 1962.

MSG.



# RUTHERFORD LABORATORY BULLETIN

No. 59 for the week commencing Monday, 29th January, 1962

## VISITORS

✓ Dr. I. V. Chuvilo and Dr. G. M. Stashkov, nuclear physicists from the Dubna Institute, near Moscow, visited the Laboratory on Wednesday, 24th and Tuesday, 25th January.

✓ Dr. I. J. van Heerden, at present Head of Nuclear Physics Division of the South African Council for Scientific and Industrial Research, will visit A.E.R.E. and the Rutherford Laboratory on Monday 29th, and Tuesday, 30th January. He will shortly take up his appointment as Chief Scientist of the newly-created Nuclear Institute of the Southern Universities of South Africa. Anyone who would like to meet Dr. van Heerden should contact B. E. Kingdon, Extn. 3196/66.

✓ Professor Kenneth M. Crowe of the Lawrence Radiation Laboratory, Berkeley, California, U.S.A., will be visiting the Rutherford Laboratory on Monday 5th, and Tuesday, 6th February. Anyone wishing to meet Professor Crowe should contact Dr. G. H. Stafford, Building R.12, Extn. 3361.

## P.L.A.

The programme scheduled for the P.L.A. during the current week is as follows:-

<u>Date</u>	<u>Team</u>	<u>Experiment</u>
X 31st January	R.A.E., Farnborough	Irradiation Experiments
31st Jan. - 2nd Feb.	N.I.R.N.S.	(p,p) Polarisation
3rd February	R.A.E., Farnborough	(See above)
" "	Clarendon Laboratory	Measurement of Capture Gamma-Rays
4th February	Kings College, London	Total Reaction Cross-Sections for Protons

## INTERNAL EVENTS

X Mon., 5th Feb., Conf. Room, Building R.1 (It is hoped that Professor K. M. Crowe of U.C.R.L., Berkeley, may give a lecture in the afternoon. Details will be announced later, if confirmed).

## EXTERNAL EVENTS

Tues., 30th Jan.: Demonstration of Vacuum Equipment (as shown at the 1962 Physical Society Exhibition) by Messrs. Edwards High Vacuum Ltd., at 10.30 a.m. - 4.30 pm. in the Conference Room, Cockcroft Hall, A.E.R.E.

X Tues., 30th Jan., 4.15 pm., 21 Banbury Road, Oxford	Clarendon Laboratory Seminar	Prof. B. P. Gregory (Ecole Polytechnique and C.E.R.N.)	Work with the 80cm Hydrogen Bubble Chamber
Tues., 30th Jan., 6.30 pm., 26 Portland Place, London, W.1.	Soc. Inst. Technology Meeting	Mr. M. W. Sage	Digital Tachometry and Tachogenerators
Tues., 30th Jan., 7 pm., Tech. Coll., Farnborough	Brit. I.R.E. Lecture	Mr. D. Harrison	Transistors in Nuclear Instrumentation

(Non-members wishing to attend should apply to Mr. F. E. Parr, 42 Carmarthen Avenue, East Cosham, Hants).

(Continued)



Wed., 31st Jan.,  
5.30 pm., Savoy  
Place, London W.C.2.

I.E.E.  
Lecture

Mr. E. B. B. Callick  
and Mr. J. C. Firmin

Storage Tubes

Wed., 31st Jan.,  
7.30 p.m., Hatchet  
Hotel, Newbury

Engineers'  
Guild  
Meeting

Dr. J. B. Adams  
(A.E.A., Culham  
Laboratory)

The Organisa-  
tion of an  
International  
Research Project

(All members of the Institutions of Civil, Mechanical, Electrical or Chemical Engineers are invited).

X Thurs., 1st Feb.,  
2 pm., Conf. Room,  
Bldg. 8.9, A.E.R.E.

Theoretical  
Physics  
Seminar

Professor R. Brout  
(Cornell University,  
U.S.A.)

Non-adiabatic  
Perturbative  
Techniques

Mon., 5th Feb.,  
5.45 pm., Reactor  
School, A.E.R.E.

A.S.E.E.  
Lecture

Staff of  
Cambridge  
Instrument Co.

Instrumentation

Thurs., 1st Feb.,  
3.30 pm., Wantage,  
Research Laboratory

Isotope  
Research  
Talk

Mr. E. W. J. Mitchell  
(Reading University)

Radiation  
Effects in  
Solids

B. E. Kingdon  
Scientific Administration

29th January, 1962