

RUTHERFORD LABORATORY BULLETIN

No. 130 for the week commencing 12th August, 1963

VISITOR

Dr. W. A. Wenzel of U.C.R.L., Berkeley will visit the Laboratory on 12th-19th August. Anyone wishing to see Dr. Wenzel should contact Dr. J. J. Thresher, Ext. 443.

VISITS ABROAD

Dr. F. M. Russell of the Cyclotron Group returned on 1st August from a twenty two months' attachment at the Oak Ridge National Laboratory. His office is at present in Room 1.5, Building R.25, Ext. 247.

Mr. N. M. King of the Theoretical Group returned on 1st August from a fifteen month attachment at C.E.R.N. His office is at present in Room 2.38, Building R.1., Ext. 455.

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>
12th August	R.H.E.L. and Kings College, London	(p-He) Differential Cross-Section Measurement at 50 MeV.
13th-17th August	Birmingham Univ.	Polarisation Measurement at 30 and 50 MeV.

FIRST AID COURSE

It has been suggested that a First Aid Course should be arranged at the Rutherford Laboratory. Would those interested please contact Mrs. M. Roberts, Room 7, Building R.12., Ext. 441.

EXTERNAL COURSES

A number of courses in Radiation Safety and Health Physics will be held at the Liverpool College of Technology during the 1963-64 session. Full details may be obtained from Mr. W. Burrells, Building R.20., Ext. 253.

H. F. Norris
Scientific Administration

9th August, 1963.

Building R.32.

RUTHERFORD LABORATORY BULLETIN

No. 131 for the week commencing 19th August, 1963

VISITOR Dr. M. Govindjee, Head of the Physics Department, Tripoli College of Advanced Technology is visiting the Laboratory from 9th August to 20th September. He is attached to the High Energy Physics Group and his office is in Building R.1.

VISITS ABROAD Dr. W. D. Allen, Mr. P. Bowles, Mr. P. D. Dunn and Mr. N. M. King will attend the International Conference on High Energy Accelerators at Dubna, U.S.S.R. from 21st - 27th August. A party representing the Electron Laboratory, Daresbury will also be attending.

Mr. D. H. Lord of the Bubble Chamber Group and Mr. J. W. Burren of the Theoretical Physics Group will visit the College de France, Paris on 20th - 23rd August, where they will attend a Conference on automatic measuring machines for bubble chamber track analysis.

Mr. M. H. R. Donald of the Nimrod R. F. Group will visit D.E.S.Y. Hamburg for two weeks from 25th August for discussions of problems related to the R.F. system of the Electron Synchrotron.

P.L.A. The P.L.A. will be shut down for eight weeks from 19th August. During this period, general maintenance will be carried out, modifications made to the modulators, a single gap analysing magnet will be installed and connections made to the new pump house. Also scheduled during this period is the setting up of apparatus and shielding for a new neutron time of flight experiment.

CONFERENCE The British Computer Society, The British Institution of Radio Engineers and The Institution of Electrical Engineers announce a Joint Computer Conference on the 'Impact of the User's Needs on the Design of Data Processing Systems', to be held in Edinburgh from 31st March - 3rd April, 1964. Enquiries should be made to the Computer Conference Secretariat, The I.E.E., Savoy Place, London W.C. 2. Tel: Covent Garden 1871.

MISSING A copy of Stanford Report No. H.E.P.L.-33. Would finder please contact Dr. P. A. Chatterton, Building R.1, Ext. 453.

COURSES The following evening courses will be held at the Polytechnic, 309 Regent Street, London, W.1; during the 1963-64 session:-

Mathematical Statistics	Modern Electric Network Theory
Advanced Mathematics	Physics of the Solid State
Automatic Digital Computers	Solid State Devices including
Introduction to Electronic Data-Processing	Masers
Fortran	Microwave Principles and Practice
More Advanced Electronics	Nuclear Physics

Details may be obtained from Mr. P. Clare, Personnel Branch, Building R.20, Ext.495.

The following courses will be held at the Borough Polytechnic London, S.E.1:-

Laboratory Techniques and Measurements - afternoons or evenings.
Nuclear Power - evenings only.
Nucleonic Circuitry - evenings only.

Details may be obtained from Mr. P. Clare, Personnel Branch, Building R.20, Ext.495.

The Isotope School, Wantage Research Laboratory (A.E.R.E.) have issued a programme of courses for 1964. Further information can be obtained from H. F. Norris, Building R.32. Ext. 484.

EVENT AT A.E.R.E. FILM:- "The Many Faces of Argonne", a 60-minute colour film of the Argonne National Laboratory, will be shown at 11 a.m. and 3.30 p.m. on 26th August and 11 a.m. on 27th August, in the Cockcroft Hall. The outer gates will be open and the inner gate manned on 27th August only.

Building R.32.
16th August, 1963

H. F. NORRIS

AKF

RUTHERFORD LABORATORY BULLETIN

No.132 for the week commencing 2nd September, 1963

VISITORS. The following American physicists will visit the Laboratory on the dates given below. Anyone wishing to see them should contact the member of staff indicated:-

Dr. E. M. McMillan, Director of the Lawrence Radiation Laboratory, Berkeley, 3rd-5th September. (Dr. T. G. Pickavance, Ext.368).

Dr. W. D. Hartsough, U.C.R.L., Berkeley, 5th-6th September. (Dr. J. J. Thresher, Ext.443).

Dr. P. J. Reardon, Princeton University, 5th-6th September. (Mr. L. B. Mullett, Ext.403).

Dr. D. L. Judd, U.C.R.L., Berkeley, 9th-10th September. (Mr. W. Walkinshaw, Ext.532).

Dr. E. C. Hartwig, U.C.R.L., Berkeley, 9th-11th September. (Mr. H. Hadley, Ext.462).

A party of University Engineering Lecturers will visit the Laboratory on Thursday, 5th September.

VISITS ABROAD. Mr. M. Snowden, to C.E.R.N., 3rd-4th September, to attend a meeting of the Track Chamber Committee.

Dr. W. Galbraith, to Brookhaven National Laboratory for one year commencing 4th September. (During his absence any matters concerning the A.E.R.E. High Energy Physics Group at the Rutherford Laboratory should be referred to Dr. G. Manning, Room 2-28, Ext.6154).

Mr. R. S. Gilmore, to Brookhaven National Laboratory for one year commencing 5th September.

NEW ELEMENTARY PARTICLE. The discovery of the anti-Xi-zero particle has been announced by the U.S. Atomic Energy Commission. The work was done at the Brookhaven National Laboratory with a beam of anti-protons at 3.69 GeV from the A.G.S. machine, and a 20-inch liquid hydrogen bubble chamber.

C.E.R.N. FELLOWSHIPS AND RESEARCH ASSOCIATESHIPS, 1963. Full details of these awards and a list of current vacancies at C.E.R.N. may be obtained from Mr. P. Clare, Personnel Branch, Building R.20, Ext.495. Completed application forms for the awards are due at Geneva by 16th September, 1963.

FELLOWSHIP AWARDS. A small number of Post-Doctoral Fellowships, tenable in Australia, are available under the sponsorship of the Australian Institute of Nuclear Science and Engineering, which is an organisation set up jointly by the Australian Universities and the Australian Atomic Energy Commission. Applications will be considered on a continuous basis, so no closing date is specified in the announcement, copies of which may be seen on application to Mr. P. Clare, Personnel Branch, Building R.20, Ext.495.

MISSING. Nuclear Instruments and Methods, Vol.20, January 1963. This periodical contains the Proceedings of the 1962 CERN Conference of Instrumentation for High Energy Physics and is urgently required. Would anyone with knowledge of its whereabouts please contact Mr. I. C. G. Sewter, Library, Building R.32, Ext.384.

INTERNAL EVENTS.

Thurs., 5th Sept.,
3.30 p.m., Conf.
Rm., Bldg.R.1

Lecture

Dr. L. Malter,
(Vice-President,
Varian Associates Ltd.)

Low Pressure
Measurements.

Mon., 9th Sept.,
2.30 p.m., Conf.
Rm., Bldg.R.12

Informal
Talk

Dr. W. D. Munn
Glasgow University

The Generalised
Inverse of a
Matrix.

Building R.32,
Rutherford Laboratory.

H. F. NORRIS

30th August, 1963

RUTHERFORD LABORATORY BULLETIN

No. 133 for the week commencing 9th September, 1963.

VISITOR

Dr. E. C. Hartwig of U.C.R.L., Berkeley, will visit the Laboratory from 9th-11th September. Anyone wishing to see him should contact Mr. H. Hadley, Ext. 462.

VISITS ABROAD

Mr. M. Snowden, Dr. E. Pickup and Dr. A. Segar will visit Physikalisches Staatsinstitut, Hamburg on 12th-13th September to discuss collaboration between DESY (German Electron Synchrotron Laboratory) and N.I.R.N.S.

INTERNAL EVENT

Thursday, 12th September: Mobile Exhibition of Electronic Measuring Equipment by Advance Components Ltd., Ilford. (Wide range of current models including several new products) 10 a.m.-4 p.m., adjacent to Building R.20.

EXTERNAL EVENT

R. H. S. Crossman M.P. will give a talk entitled "Science in the Sixties" at the Council Chambers, Abingdon, Friday, 13th September, at 8 p.m.

ADMINISTRATION NOTICE

Found near Building R.1. on Saturday, 31st August, a 6" slide rule in leather case, made by the Diwa Manufacturing Co., Denmark. Owner should contact Mr. J. Jefferies, Admin. Office, Building R.20.

H. F. Norris

Building R.32.,
Rutherford Laboratory.

6th September, 1963.

RUTHERFORD LABORATORY BULLETIN

No. 134 for the week commencing 16th September, 1963

VISITORS Prof. T. Erber of the Illinois Institute of Technology will visit the Laboratory on Thursday, 19th September, to discuss theoretical and experimental aspects of quantum electrodynamics. Anyone wishing to see him should contact Dr. P. F. Smith, Ext. 6604.

Representatives from various Colleges of Advanced Technology will visit the Laboratory on Friday, 20th September.

VISITS ABROAD Dr. R. H. Thomas, Bubble Chamber Group, and Mr. D. R. Perry, Radiation Protection Group, to C.E.R.N. on 16th-17th and 16th-18th September respectively for discussions on future shielding experiments.

Mr. R. T. Elliott, Bubble Chamber Group, to C.E.R.N. on 16th September for one month to work on the final installation of the British National Hydrogen Bubble Chamber.

Dr. R. H. Thomas to U.C.R.L. Berkeley on 20th September, where he will be attached for 18 months to work in the accelerator study group.

ATTACHMENT Professor A. W. Fairhall of the University of Washington, Seattle, will be attached to the Laboratory as a visiting scientist for a period of approximately one year as from Tuesday, 10th September. His office is in the Nuclear Chemistry Wing, Building R.34, Ext. 483.

COURSES The following courses will be held at the School of Electrical Engineering, College of Technology, Oxford:- Solid State Physics; Digital Computers; Advanced Circuit Analysis; Advanced Mathematics; and The Theory and Circuit Applications of Semiconductors and Transistors.

The A.E.R.E. Reactor School, Building 455, propose to hold a short course of evening lectures, weekly during October and November. The subjects chosen will broadly cover the current work of the Harwell Establishment.

Details of above courses may be obtained from Mr. P. Clare, Building R.20, Ext. 495.

It is proposed to hold a course of lectures in the near future on Techniques of Numerical Analysis, with special emphasis on methods suited to digital computers. Anyone interested should contact Mr. T. R. Walsh, Building R.1, Ext. 438.

LIBRARY NOTICE Would the member of staff who posted two Journal Subscription Cards to Pergamon Press Ltd., Oxford, on 5th September, please contact Scientific Administration, Room 7, Building R.32, Ext. 484.

INTERNAL EVENTS

Mon., 16th Sept., 11.15 a.m., Conf. Rm., Bldg. R.1.	Nimrod Lecture Series	Dr. D. V. Bugg	A Proposal to Investigate Polarization Phenomena in High Energy Elastic pp and π p Scattering.
Tues., 17th Sept., 5.30 p.m., Conf. Rm., Bldg. R.1	Accel. Lecture Series	Dr. N. D. West	Proton Linacs - Phase Motion and Aspects of R.F. Design.
Mon., 23rd Sept., 11.15 a.m., Conf. Rm., Bldg. R.1.	Nimrod Lecture Series	Dr. W. D. Allen and Mr. P. D. Dunn	Report on Dubna Conference on High Energy Accelerators.

Building R.32.
13th September, 1963

AKF

H. F. Norris

RUTHERFORD LABORATORY BULLETIN

No. 135 for the week commencing Monday, 23rd September, 1963

ZGS MACHINE The following cable has just been received from the Argonne National Laboratory:

"ZGS accelerated 10^{10} power beam to 12.7 GeV at 03.35 on September 18th."
(Signed) L. C. Teng.

The Director has sent heartiest congratulations from all at the Rutherford Laboratory.

VISITOR Professor Seitaro Yamaguchi of the Institute for Nuclear Study, University of Tokyo, will visit the Laboratory on Monday, 30th September.

VISITS ABROAD Professor W. D. Walker, Dr. G. H. Stafford, Dr. J. J. Thresher, Dr. C. M. Fisher, Dr. A. E. Taylor, Dr. A. M. Segar, Dr. G. Manning, Mr. D. Morgan, and Dr. N. R. S. Tait of the N.I.R.N.S. Electron Laboratory, will attend the International Conference on Elementary Particles at Sienna, Italy, on 30th September to 5th October. Dr. Taylor, Dr. Manning, Mr. Morgan and Dr. Tait will also visit C.E.R.N. before returning home.

ATTACHMENTS Professor W. D. Walker of the University of Wisconsin arrived at the Laboratory on 29th August for a period of approximately five months' attachment. His office is in Room 1-50, Building R.1, Ext. 6150.

Dr. B. J. Dropesky of the Los Alamos Scientific Laboratory will be attached to the Laboratory as a visiting scientist for a period of approximately one year, as from 16th September. His office is in the Nuclear Chemistry Wing, Building R.34, Ext. 483.

Mr. P. Zupranski of the Warsaw Institute for Nuclear Research will be attached to the Laboratory for a period of ten months commencing 16th September, under a Fellowship from the International Atomic Energy Agency, Vienna. He is in Office No. 2, Building R.12, Ext. 421.

CONSULTANT Professor R. H. Dalitz, recently of the Enrico Fermi Institute for Nuclear Studies, Chicago, now at Oxford University as a Royal Society Professor, has been appointed a Consultant to the Laboratory with effect from 16th September, under the sponsorship of the Director. His office is temporarily in Building R.1, Room 1-38, Ext. 524.

INTERNAL EVENTS

Mon., 23rd Sept., 11.15 a.m., Conf. Rm., Bldg. R.1.	Nimrod Lecture Series	Dr. W. D. Allen and Mr. P. D. Dunn	Report on the Dubna Conference on High Energy Accelerators.
Tues., 24th Sept., 11 a.m., Conf. Rm. No. 4, Bldg. R.1.	Accel. Lecture Series	Mr. K. Batchelor (Proton Linacs II.)	Beam Quality & Aspects of Long Linac Design.
Thurs., 26th Sept.: Mobile Exhibition by Messrs. Imhof Ltd., Uxbridge (including latest range of modular chassis products). 10 a.m.-4 p.m., adjacent to Bldg. R.20.			
Mon., 30th Sept., 11.15 a.m., Conf. Rm., Bldg. R.1.	Nimrod Lecture Series	Dr. L. C. W. Hobbis and Mr. A. J. Egginton	Progress Report on Nimrod.

It is proposed to hold a course of lectures in the near future on Techniques of Numerical Analysis, with special emphasis on methods suited to digital computers. Anyone interested should contact Mr. T. R. Walsh, Building R.1, Ext. 438.

EVENT AT A.E.R.E.

Thurs., 26th Sept., 3.45 p.m., Tea Room, Bldg. 393.	Metall. Div. Lecture	Mr. A. D. Rossin (Argonne Nat. Laboratory)	Measuring Neutron Exposure for Studies of Irradiation Damage in Steel.
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EXTERNAL EVENTS

24th-27th Sept.: Institute of Physics and Physical Society Conference on Plasma Physics, at the U.K.A.E.A. Culham Laboratory.

Wed., 25th Sept., 4.30 p.m., University College London.	Physics Dept. Seminar	Mr. M. J. Pentz (C.E.R.N.)	Accelerator Research at C.E.R.N., and Plans for Future Accelerators in Europe.
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Wed., 25th Sept., 7.30 p.m., "Royal Oak", Woodstock Rd., Oxford.	A.S.E.E. Lecture	—	Aluminium in the Electrical Industry.
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B. E. Kingdon

Building R.32.

20th September, 1963.

CMP

RUTHERFORD LABORATORY BULLETIN

No.136 for the week commencing Monday, 30th September, 1963.

MR. P. D. DUNN

Mr. P. D. Dunn has for the past three years been responsible both for the Nimrod R.F. Group and the A.E.R.E. Direct Conversion Group. Now that a successful stage of commissioning of Nimrod has been reached, Mr. Dunn will again become a full-time member of Harwell staff as from 1st October, though he will be available for consultation by N.I.R.N.S. on request.

VISIT ABROAD. Dr. J. Howlett, Director of the Atlas Computer Laboratory, will visit C.E.R.N. from 2nd-6th October as U.K. representative, to attend a meeting on the future computing requirements of C.E.R.N.

VARIABLE ENERGY CYCLOTRON. The first magnet slabs have now been delivered and assembly of the bottom yoke has been started in Building 540, which is adjacent to the new A.E.R.E. canteen.

ELECTRICAL SAFETY LECTURE. A lecture arranged to cover all aspects of electrical safety in the work of the Rutherford Laboratory, is to be given by S. J. Emerson, O.B.E., M.Eng., M.I.E.E., H.M. Senior Electrical Inspector of Factories, in the Cockcroft Hall at 2.15 p.m., Thursday, 3rd October. Buses will leave the Main Entrance, Building R.1, at 2 p.m. and return at 4.15 p.m. Passes are not required.

INTERNAL EVENTS

There will be no lecture in the Nimrod Series on Monday, 30th September. The lecture entitled "Progress Report on Nimrod", already advertised, has been postponed until Monday, 14th October.

Tues., 1st Oct., 11 a.m., Conf. Rm., Bldg. R.1	Accel. Lecture Series	Dr. F.M. Russell	The Bee-hive Accelerator
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Wed., 2nd Oct: Exhibition by Tectonic Ltd., Wokingham, of Printed Circuits, Chemical Milling and Electronic Component Encapsulation, in Conference Room No.4, Building R.1, from 10.30 a.m.

Thurs, 3rd Oct., 5.30 p.m., Conf. Rm., Bldg. R.1	Evening Lecture Series	Prof. Merrison	NINA and Physics
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Mon., 7th Oct., 11.15 a.m., Conf. Rm., Bldg. R.1	Nimrod Lecture Series	Prof. R.H. Dalitz	Conference Reports - Brookhaven and Sienna
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EVENT AT A.E.R.E.

Thursday, 3rd October: Demonstration by the Torsion Balance Co. (Great Britain) Ltd., of Torbal Balances, in the Instrument Workshops, Building 338, from 1.30 p.m. until 4.30 p.m.

H. F. Norris

Building R.32

27th September, 1963.

MSG

RUTHERFORD LABORATORY BULLETIN

No.137 for the week commencing Monday, 7th October, 1963

VISITS ABROAD. The Director will visit C.E.R.N. on 11th and 12th October.

Mr. J. E. Hailstone of the Atlas Computer Laboratory will visit C.E.R.N. from 9th to 12th October.

UNIVERSITY POST. A vacancy for the post of Professor of Physics exists at the University of Stellenbosch, South Africa. Details can be obtained from Mr. P. Varley, H.8, A.E.R.E., Ext.72-2609.

INTERNAL EVENTS.

Mon., 7th Oct., 11.15 a.m., Conf. Rm., Bldg.R.1	Nimrod Lecture Series	Prof. R. H. Dalitz	Conference Reports - Sienna and Brookhaven
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Tuesday, 8th October: A meeting will be held at 9.30 a.m. in Conference Room No.4, Building R.1, to discuss the proposed course on "The Techniques of Numerical Analysis". The syllabus and timing of the lectures will be considered.

There will be no lecture in the Thursday Evening Series this week.

Mon., 14th Oct., 11.15 a.m., Conf. Rm., Bldg.R.1	Nimrod Lecture Series	Dr. L. C. W. Hobbis and Mr. A. G. Egginton	Progress Report on Nimrod
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EVENTS AT A.E.R.E.

Friday, 11th October, 2.30 p.m. to 4.30 p.m.: Exhibition by the Nucleonics Group of S.I.M.A. in the Reactor School and in the Cockcroft Hall car park. (No passes required).

* A series of twelve lectures on "Crystal Defects and Irradiation Damage" will be given by Dr. A. B. Lidiard in the Reactor School, commencing on Thursday, 24th October. Anyone interested should contact H. F. Norris, Building R.32, Ext.484.

Post Graduate Education Centre: A series of four lectures on "The Role of a Unit System of Electronic Equipment in Nuclear Research" will be given by Mr. H. Bisby on 11th, 13th, 18th and 20th November, 1963, at 9 a.m. each day.

EXTERNAL EVENTS.

Tues., 15th Oct., 7.15 p.m., Small Town Hall, Reading	I. Mech. E Lecture (Visitors welcome)	Mr. W. N. Neat	Engineering Problems in the Development of Rocket Engines
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A course of about twelve weekly lectures on superconductivity will start on Thursday, 17th October, at 6.30 p.m., at the Oxford College of Technology.

Rutherford Laboratory.
4th October, 1963

H. F. NORRIS
Scientific Administration

VDW

* Ring Coupland (587)

RUTHERFORD LABORATORY BULLETIN

No. 138 for the week commencing 14th October, 1963

VISITS ABROAD Dr. J. Howlett, Director of the Atlas Computer Laboratory, will visit C.E.R.N. on 14th-15th October.

Dr. H. H. Atkinson of the Nimrod Injector Group (Research) will visit the U.S.A. from 15th October to 9th November, where he will present a paper at the 10th National Symposium of the American Vacuum Society at Boston on 16th-18th October and attend the American Physical Society Plasma Physics Meeting at San Diego on 6th-9th November. He will also visit the Lewis Research Center at Cleveland, the Argonne, Oak Ridge and Berkeley Laboratories, and the Space Technology Laboratories at Los Angeles in connection with charged particle beam research and polarized proton sources.

Mr. A. Carne of the P.L.A. Accelerator Physics Group will visit the U.S.A. for two weeks commencing 19th October, to attend a meeting on linear accelerators at Yale University, and for discussions at Brookhaven National Laboratory.

P.L.A. For the past eight weeks the P.L.A. has been shut down. During this period four major jobs have been completed as well as the annual maintenance. A single-gap spectrometer magnet has been installed in the new experimental area. The clearing magnet for neutron time-of-flight experiments has been re-sited to provide 20 flight paths in the angular range 0-90°. A new pump and heat exchanger house have been commissioned for the water system and the remaining ignitron switch tubes in the modulators have been replaced by thyratrons.

The programme scheduled for the current week is as follows:-

<u>Date</u>	<u>Team</u>	<u>Experiment</u>
14th-19th Oct.	R.H.E.L.	Machine Commissioning and Accelerator Physics.
20th-21st Oct.	Queens Univ., Belfast and Westfield College	Shell Structure Studies (p,2p).

INTERNAL EVENTS

Mon., 14th Oct., 11.15 a.m., Conf. Rm., Bldg. R.1.	Nimrod Lecture Series	Dr. L. C. W. Hobbs and Mr. A. G. Egginton	Progress Report on Nimrod.
Tues., 15th Oct., 9-12 a.m., Conf. Rm., Bldg. R.12.	Lecture Course	Dr. R. Taylor	Introduction to Fortran Programming - 1.
Tues., 15th Oct., 3.30 p.m., Conf. Rm., Bldg. R.12.	Accel. Lecture Series	Mr. G. Saxton (A.E.I.)	Fundamental Design Problems in Electron Linacs.
Wed., 16th Oct. 9-12 a.m., Conf. Rm., No. 4, Bldg. R.1.	Lecture Course	Dr. R. Taylor	Introduction to Fortran Programming - 2.
Thurs., 17th Oct., 5.30 p.m., Conf. Rm., Bldg. R.1.	Evening Lecture Series	Dr. R. F. Churchhouse (Atlas Laboratory)	Variable Stars.

EVENTS AT A.E.R.E. Exhibition of Ultrasonic Equipment by Mullard Equipment Ltd., Tuesday 15th October, from 11 a.m.-4 p.m. Games Room of the Social Club.

Societe Genevoise Ltd. will be exhibiting their system for precision measurement and position control in the Conference Room of the Cockcroft Hall on Wednesday, 16th October, 11 a.m.-4.30. Concurrently, a lecture on the same subject will be given by Mr. P. C. F. Wolfendale of Sogenique (Electronics) Ltd. in the Lecture Theatre, commencing at 2.15 and lasting for about an hour, followed by questions. The outer gate will be open and the inner gate manned. Further information available from H. F. Norris, Building R.32.

/Continued Overleaf

(EVENTS AT A.E.R.E. Cont.)

Film:- "Nuclear Power for the Nation", a new 30 minute film made by C.E.G.B. will be shown in the Cockcroft Hall at 4.15 p.m. on 15th October and at 10.45 a.m. on 16th October. The outer gate will be open for the showing on 15th October.

EXTERNAL EVENTS 15th-17th October: 16th Annual Engineering Exhibition, New Horticultural Hall, London S.W.1. (Tickets may be obtained from H. F. Norris, Building R.32. A catalogue is available).

Exhibition:- "Atoms at Work", Oxford College of Technology, Headington from 17th-26th October, 9.15 a.m. to 7 p.m. daily (closed Sunday). Films and lectures will be included. Pamphlets are available from L.A.O.'s.

Fri., 18th Oct. 4.15 p.m. Clarendon Laboratory, Oxford.	Physics Colloquium	Prof. B. Bleaney, F.R.S. (Clarendon Laboratory)	Crystal Fields and the Cooperative State.
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H. F. Norris

Scientific Administration

Rutherford Laboratory

11th October, 1963.

RUTHERFORD LABORATORY BULLETIN

No.139 for the week commencing Monday, 21st October, 1963

VISITS ABROAD. Dr. D. P. Jones of the High Energy Physics Group will visit C.E.R.N. from 21st to 25th October for discussions on future experiments.

Dr. J. Howlett will attend a meeting at C.E.R.N. on 25th October, to discuss future computing requirements at C.E.R.N.

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>
21st-24th Oct.	Queens Univ., Belfast and Westfield College	Shell Structure Studies (p, 2p)
25th-27th Oct.	Oxford University	$C^{12}(p,n)N^{12}$ Reaction

SYMPOSIUM. About 40 delegates from various Universities and Government Research Establishments will attend a Data Processing Symposium, organised by the Atlas Computer Laboratory and the Space Research Management Unit of the Office of the Minister for Science, to be held at the Rutherford Laboratory on Tuesday, 22nd October.

CONFERENCES. The Institute of Physics and the Physical Society will hold the following conferences on the dates indicated:-

16th-18th December: "The Electrical and Magnetic Properties of Thin Films in Relation to their Structures" at Imperial College, London. (Advance registration is necessary).

1st-4th January 1964: "Solid State Physics" at the H. H. Wills Physics Laboratory, University of Bristol. (Application forms may be obtained from Mr. P. Clare, Bldg. R.20).

COURSE ON SUPERCONDUCTIVITY. Theoretical Aspects of Superconductivity: A course of nine lectures by M. J. Zuckermann, (Clarendon Laboratory) at the Oxford College of Technology, will be given on Thursdays 7.00-8.30 p.m. (Further details from Mr. P. Clare, Bldg. R.20).

INTERNAL EVENTS.

Mon., 21st Oct., 11.15 a.m., Conf. Rm., Bldg.R.1.	Nimrod Lecture Series	Dr. D. Perkins (Bristol Univ.)	The CERN Neutrino Bubble Chamber Experiment.
Mon., 21st Oct., 2.15 p.m., Conf. Rm., Bldg.R.1	Nimrod Lecture Series	Dr. L. Riddiford & Dr. J. Dowell (Birmingham Univ.)	Search for Resonances using 1-7 GeV Protons.

It is also expected that Dr. Kirtz of U.C.R.L., Berkeley will lecture at 4.15 p.m. on Monday, 21st October.

Mon., 28th Oct., 11.15 a.m., Conf. Rm., Bldg. R.1	Nimrod Lecture Series	Mr. J. A. Newth (Imperial College)	Revised Proposal for the I.C. and Manchester Univ. Experiments on Nimrod.
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EVENTS AT A.E.R.E.

A series of six evening lectures on finance has been arranged by the Post-Graduate Education Centre in collaboration with the A.E.R.E. Finance Branch, to be held in the Reactor School commencing 30th October, 1963. Applications to attend should be made to the Administrative Officer, Reactor School, Bldg. 455, Ext.2571. Further details may be obtained from H. F. Norris, Bldg. R.32, Ext.484.

EXTERNAL EVENTS.

Mon., 21st Oct., 5 p.m., Univ. of Reading	Physics Dept. Colloquium	Prof. F. C. Frank (Bristol Univ.)	Type 2 Superconductivity.
Tues., 22nd Oct., 2.30 p.m., 21 Ban- bury Rd., Oxford	Nuclear Physics Seminar	Dr. H. J. Rose (Freiburg Univ.)	Experimental Studies of the Shell-model Structure of the N^{14} Nucleus.

/Cont. over

EXTERNAL EVENTS (contd.)

Thurs., 24th Oct.,
11 a.m., Univ. of
Southampton

Physics
Post-Grad.
Discussion

Dr. R. G. Scurlock

The Magnetism of
the Nucleus.

Mon., 28th Oct.,
4.45 p.m., Univ.
of Bristol

Physics
Colloquium

Prof. F. C. Frank
(Bristol)

Dislocations and
Superconductivity.

Rutherford Laboratory
18th October, 1963

H. F. NORRIS
Scientific Administration